

DUCK, NORTH CAROLINA

CAMA CORE LAND USE PLAN

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COMMUNITY PLANNING COLLABORATIVE, INC.

DUCK, NORTH CAROLINA ~2003-2004 CAMA CORE LAND USE PLAN~

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EXECUTIVE SUMMARY

- In November 2001, the voters in Duck voted to incorporate and become Dare County's sixth municipality. On May 1, 2002, Duck officially became a town.
- The Duck 2003-2004 CAMA CORE Land Use Plan (the Plan) is the Town's first independent land use plan. Before this effort, Duck had been included in land use plan(s) developed by Dare County.
- The Coastal Area Management Act of 1974 (CAMA) establishes a cooperative program between local governments and the State. Land use planning lies at the center of local government's involvement. Land Use Planning Guidelines were adopted by the State to help localities prepare local plans. Duck's land use plan, when reviewed and certified by the North Carolina Coastal Resources Commission (CRC), will become part of the North Carolina Coastal Management Plan for the protection, preservation, orderly development, and management of the coastal area of North Carolina.
- Land use planning is one of the ways a community looks into the future. The land use plan will look ahead to the next 10 to 20 years. It will be reviewed and updated every five years.
- Duck, while recognized by many people as a slow paced, coastal village and family oriented vacation destination, is also a vibrant and growing community in terms of both permanent and seasonal population. With just over 500 permanent residents, the Town's peak population during the summer grows to nearly 15,000. Indications are that Duck, like its Outer Banks neighbors, will likely see increases in its permanent population as well.
- The Duck 2003-2004 CAMA CORE Land Use Plan is one of the major tools Duck will use to manage growth and development. The Plan will help the Town ensure that new development and new land uses, as well as redevelopment initiatives, are compatible with its coastal village atmosphere and with the desires and aspirations of its residents and property owners. The Plan will help the Town plan for essential services to meet the needs of its permanent and seasonal population. Moreover, the Plan will help Duck protect the essential coastal resources that help define the community's life style.
- The Plan will provide a solid foundation for day-to-day and long range functions. Day-to-day functions relate to the Town's administration of its growth and development management ordinances and guidelines, and the public's understanding and use of these tools for decisions regarding their own property with respect to land use and development. For the Planning Board

and Town Council, the Plan will be a policy and decision guide on matters concerning land use and development in Duck. The policies, objectives, and future land use map included in the Plan will help guide Duck's decisions about ordinances and policies such as the zoning ordinance and development design guidelines. The Plan will also be used as the Town Council makes decisions on the Town's capital and annual operating budgets and the allocation of financial and personnel resources.

- The Town's residents and property owners played a major role in the development of the Plan, its goals, policies, and objectives, and the future land use map. The Town, and the planning process, benefited greatly from the efforts of an appointed Land Use Plan Committee which was available for meetings on a monthly basis for nearly two years beginning in early 2003 through the end of 2004. All Committee meetings were open to the public. In addition, opportunities for citizens to participate in the planning process included: an initial public input session; community open houses and public input sessions; Town Council and Planning Board meetings; presentations at neighborhood and civic association meetings; and, distribution of a community questionnaire. The questionnaire, which was distributed at public sessions and at neighborhood and civic association meetings, was also posted on the Town's web site. The Town also posted the Plan on its website, made review copies available to the public, and distributed copies to neighboring localities.
- The Plan was developed in two phases. Phase I consists of two basic components:
 1. **Description of Town concerns and aspirations and a Town planning vision.** Analyzes the growth and development issues in Duck that emerged during the citizen participation process. Describes a planning vision for the Town that provides a foundation for effective land use and development goals, policies, and objectives.
 2. **Analysis of existing and emerging trends.** Provides the technical basis for policy development: trends and forecasts of population, housing, and local economy. Discusses opportunities and limitations presented by the Town's natural systems as well as its assets and some of the resources Duck may use to meet its goals. Examines existing land uses and recent trends and provides information on community facilities. An analysis of land suitability for development synthesizes the information contained in the chapters comprising this component.

- Phase II of the Plan also consists of two basic components:
 1. **Land use goals, policies, and objectives.** The Town's land use and development goals, policies, and objectives are found in **Chapter IX Plan for the Future**. Goals, policies, and objectives for twenty-eight (28) issue areas evolved from the Town's planning vision and provide direction for implementing the Plan. The Plan's issue areas include five management topics identified by the CRC (Public Access, Land Use Compatibility, Infrastructure Carrying Capacity, Natural Hazard Areas, and Water Quality). The Plan's issue areas also include twenty-three local areas of concern regarding ocean and sound shoreline management, development and redevelopment activities, community appearance, community infrastructure, public health and safety, transportation, parks and trails, and tourism. The land use and development goals and policies related to these issues provide guidance on decisions, programs, initiatives, and projects to help the Town implement the Plan.
 2. **Tools for managing development.** This Phase II component identifies tools for managing development. It outlines Duck's strategies and action plan for implementing the Plan's policies: development and/or amendment of ordinances; implementation (or continuance) of land use and development related programs and initiatives; capital investments; and, funding resources to achieve identified goals.
- The Plan includes an analysis to determine the consistency of Duck's land use policies and the future land use map with the goals of the Coastal Area Management Act and the Coastal Resources Commission's land use management topics. The analysis concludes that there is a high level of consistency.

Chapter I: Introduction

A. This is Duck, North Carolina

In November 2001, the voters of Duck voted to incorporate and become Dare County's sixth municipality. On May 1, 2002, the Town of Duck officially became a town. Duck is located in the northernmost part of Dare County and borders the Town of Southern Shores, Currituck County, the Currituck Sound, and the Atlantic Ocean. Access to Duck is via NC 12 which is also called Duck Road within the Town limits. See EXHIBIT I-A. The Town contains 2.32 square miles and is about 6 miles in length. The Town enjoys a reputation as a cottage community, appealing to tens of thousands of tourists yearly, and about 450 permanent residents.

The Town is preparing its first CAMA land use plan, having been included previously in the plan(s) developed by Dare County. The Town uses a Council-Manager form of government. The Town hired its first manager in November 2002, its first chief of police in February 2003, and its planning director in May 2003.

B. Purpose and Authority to Plan

The Coastal Area Management Act of 1974 (CAMA) establishes a cooperative program of coastal area management between local governments and the State. Land use planning lies at the center of local government's involvement. Subchapter 7B – Land Use Planning Guidelines of the North Carolina Administrative Code, October 1989 (revised in 2003), were promulgated for the purpose of assisting localities with the preparation of land use plans and sets forth standards for their review. Land use plans are submitted for State review and certification. The land use plan, when certified by the North Carolina Coastal Resources Commission (CRC), will become part of the North Carolina Coastal Management Plan for the protection, preservation, orderly development, and management of the coastal area of North Carolina.

Land use planning is one of the ways a community looks into the future to determine what it wants to be and what it wants to look like. The land use plan will look ahead to the next 10 to 20 years. It will be updated every five years. One of the key elements of the plan is citizen participation. This ensures that the plan is truly designed by the community for the community.

EXHIBIT I-A DUCK, NORTH CAROLINA REGIONAL SETTING



A land use plan can describe how a community desires to develop physically, economically, and socially. The plan functions much like a road map, conveying to community leaders citizens' plans and hopes for the future of the community. It also conveys to the regional community how the town's citizens and leaders expect to help shape the future of the Town.

The land use plan includes a discussion of Town concerns and aspirations and existing and emerging conditions. The State requires discussion of locally identified issues and problems and assets the Town may face or use to achieve its goals. The land use plan includes discussion of population, housing, and economy as well as natural systems and existing land use and development. The land use plan also examines a variety of environmental issues which impact development patterns and Town facilities. The land use plan also plans for the future, spelling out Town land use and development goals and policies. It also specifies tools the Town will use to manage growth and development and craft its future physical appearance and form.

C. Planning Methodology

The Duck Land Use Plan Committee (Committee) serves as the body responsible for guiding the CAMA land use plan development effort. The Committee receives assistance from the Town Manager and the planning consulting firm Community Planning Collaborative, Inc.

The Committee meets on a monthly basis or as needed throughout the project period on the first Friday of each month. Meetings are held at the Duck Town Offices in the Council Meeting Room in Duck 10:00 a.m. Meetings are open to the public and meeting times are advertised in the local news media. In addition to a Committee orientation meeting and an initial public information meeting, subsequent meetings of the Committee focus on review and discussion of information gathered and analyses made. The Committee reviews draft materials prepared by the planning consultant, assists in defining land use and development issues and concerns, and provides general input.

D. Citizen Participation and Intergovernmental Coordination

According to 15 A NCAC Subchapter 7L, local governments receiving Department of Environment and Natural Resources (DENR) funding for CAMA land use plan preparation, must develop and implement a citizen participation plan. Local governments employ a variety of educational efforts and participation techniques to assure that all socioeconomic segments of the community and non-resident property owners have opportunities to participate during CAMA land use plan development. Examples are surveys or questionnaires, informational brochures or materials, community outreach, and public information meetings.

At the start of CAMA land use plan development, the Town Council adopted a citizen participation plan. Interested citizens have opportunities to participate in the development of the CAMA land use plan through oral and written comments as provided for in the citizen participation plan. Copies of informational materials are made available at all meetings of the Land Use Plan Committee. The citizen participation plan is available for public review throughout the planning process.

The Town recognizes that citizen participation and citizen education must be made available on a continuing basis. During and after the CAMA land use plan project, the Town would like to educate citizens with respect to the importance of land use planning and its effect of their quality of life; listen to citizens concerning issues important to them; create opportunities to collaborate with citizens to achieve community consensus; and, create a base of citizen support for implementing the land use plan.

Copies of the draft land use plan were provided for review and comment to Dare County, Currituck County, and the town of Southern Shores. Written comments from Dare County were received. Dare County's comments relative to development along ocean and sound areas were noted and discussed as a part of the planning process. Many of the County's suggestions/issue areas will be addressed further as the Town develops ocean and sound side zoning overlays. Also, the Town will develop a hazard mitigation plan with a debris management element during the planning period. No other written comments were received within the specified 45-day review period. Municipal planners from many of the Outer Banks communities meet monthly to discuss regional issues. No jurisdictional issues relative to the land use plan have been identified.

Chapter II: Concerns and Aspirations

This chapter provides general guidance and direction for the development of the Duck Land Use Plan. Determining concerns and aspirations is one of the points where the Town's citizen participation process is directly linked to the land use planning process. The citizen participation plan provides opportunities for stakeholders to express their concerns and aspirations. Assessing Duck's concerns and aspirations includes the identification of existing and emerging conditions and key issues important to the Town. Several issues--labeled by the State as management topics--must also be addressed according to CAMA guidelines.

The vision statement is also a major component of the planning process. The vision depicts in words what Duck is striving to become and serves as the starting point for the creation (and implementation) of the land use plan. It recognizes trends and driving forces that will affect the Town during the planning period and acknowledges the concerns, opinions, and values identified by stakeholders and citizens. Vision statements blend priority issues, driving forces, citizen values, and the preferences of the Town. The vision helps to guide the development of the planning information base, short-term and long-term policies, the future land use plan map, and the plan's implementation strategies. The vision also helps in describe the desired general physical appearance and form Duck will take and forms the basis of the Town's land use plan objectives.

A. Existing and Emerging Conditions

Some of the central issues influencing this land use plan and some of the dominant growth related conditions that influence land use, development, water quality, and other environmental concerns include: continuing pressure by the development community for greater development densities (oversized single-family dwellings), public open space, storm water management, beach erosion and dune loss, beach nourishment and dune stabilization, provision of public accesses and related parking facilities, the proposed mid-Currituck County bridge, and ensuring the present alignment of NC 12 through Duck. Residential growth in Duck has continued at a steady pace since over the last ten years. Since 1990, the percentage of year-round residents--as opposed to seasonal residents--has risen slightly and thus the number of seasonal use structures has decreased. Residential and commercial growth in Duck has continued at a steady pace.

Descriptions of existing and emerging conditions follow. These broad themes and trends provided background and context for the identification of planning issues discussed later in this chapter.

1. Population Changes

Dramatic population fluctuations in Duck and the surrounding region occur as tourists continue annual migrations to the area. Many observers feel that the total number of visitors is increasing annually and that the summer season is not the only time Duck and the rest of the Outer Banks are seeing large numbers of visitors. To many, the traditional ten week summer tourist period now extends from the spring to Thanksgiving. Increasing numbers of tourists can impact infrastructure and service delivery systems. Management of resources such as water, open space, and the Duck Trail can become more complicated as more persons use facilities.

2. Housing Trends

Housing patterns and types are generally established in Duck and the region. There are still multiple isolated lots remaining throughout Town, although land prices have risen dramatically. Single family detached homes still represent the vast majority of housing found in Duck and the region. Housing values continue to increase. Demand for housing is high while there is limited availability, particularly in the medium price ranges. Also, the construction of private (residential) swimming pools continues to increase, particularly as a part of new construction.

3. Land Development

Land development in Duck and the region could potentially exceed the capability of the land to support it. There are still some building lots in various areas of Town and a couple of isolated 2-3 acre tracts of undeveloped land. The residential development pattern for Duck Village is established and redevelopment proposals may be the wave of the future. While commercial areas are also established in the Duck Village area, there are more than a few isolated commercial areas in Duck along NC 12.

4. Water Quality

In Duck and the region, water quality protection and issues related to uses that could negatively impact water quality continue to be at the fore front. Contamination from storm water runoff and/or septic tank system problems or failures is a threat. Weather influenced changes in water quality can occur. Consistent methods of measuring changes and fluctuations are needed. Currently, Dare County monitors Sound waters once a month. Some people in Duck feel more frequent monitoring is needed.

The pros and cons associated with the development of a central (public) sewage collection and treatment system are discussed from time to time in Outer Banks communities. On the Outer Banks, the current level of use and dependence on septic tank systems serves to limit development in some areas (due to poor soils and costs associated with making the systems work properly). In effect, the lack of a central system is a growth management tool for some localities. The presence of a central system could

potentially open up some additional areas to development and increase pressure on infrastructure systems. The monetary cost of developing a central system would be substantial. The potential benefits to the environment of such a system must also be weighed.

5. Economic Conditions

Generally, the economic condition and outlook in Duck and the region is very positive. Duck businesses appear to be successful if not thriving. Employee turnover in shops and eateries does not appear to be an issue as it may be in some Outer Banks jurisdictions.

6. Natural Resource Related Industries

Duck's natural resources feature the Atlantic Ocean and Currituck Sound. Businesses (supply and rental shops) which cater to the use and enjoyment of these resources are found in Town and throughout the region. Business activities in Duck are characterized by their stability, diversity, and down-home feel.

7. Transportation

Traffic and transportation issues revolve around NC 12 and the intense development occurring north of Duck which contributes to increasing traffic through Town. The lack of parking and load/off-load areas contribute to safety and economic concerns in Duck. Shops in Duck Village and The Sanderling attract many vehicles. Pedestrian-vehicular interaction occurs at these and other areas throughout Town. The construction of a bridge connecting the Currituck County mainland to its beaches will maintain the integrity and vitality of Duck while providing safe and efficient access to areas north of Duck. This, and perhaps maintenance of the status quo are viewed by some people in Duck as the scenarios that will preserve the character of the Town. The widening and/or realigning NC 12 would significantly damage and perhaps effectively end the essence and character of Duck as a village -- now enjoyed by hundreds of residents, thousands of property owners, and tens of thousands of visitors.

8. Potable Water

Potable water is supplied to Duck through the Dare County water system. At the time of this writing, no formal contract has been executed between the Town and Dare County for supplying potable water. Many people cite the over use of water by Duck residents and visitors and the lack of conservation practices as problems that need to be addressed. Wastewater is removed through septic tank systems. No plans to construct a central sewer system (collecting and treating waste at a central plant) have been developed. Duck should continually evaluate its options with respect to the provision of potable water and participate and partner in any proposed plans to tap heretofore untapped resources with its borders. When practicable, the Town should work with Dare County and Currituck County with respect to the provision of potable water.

9. Public Policies

Through July 1, 2003, Dare County assisted Duck with general planning duties. The Town now has a planning director and its own zoning ordinance and is actively updating and adopting ordinances and studying preferences with respect to other public policies to control its own fate. The land use plan process will allow the Town to reassess its future land use which will in turn lead to zoning ordinance reassessment and the study of mechanisms such as design standards and the requirement of smart growth practices in development and redevelopment proposals. Storm water management is problematic in Duck and the region generally. A storm water management plan, perhaps on a multi-jurisdictional scale is needed. The Town should examine its options with respect to implementing a recycling program. The Town should also study its options with respect to the acquisition of Federal properties that may become available and with respect to acceptance of private lands donated for public purposes.

10. Public Safety

Public safety issues in Duck primarily revolve around the transportation system, most importantly NC 12 and dead end private roads that are found throughout the Town. In addition to NC 12, there were only seventeen state roads in the Town as of July 1, 2002. Neighborhoods served by private roads can request that the Duck Police Department enforce motor vehicle violations but other-wise, police patrols do not enforce such violations on private roads. Widening NC 12 is not supported and the mid-county bridge is, at best, years away. Duck has the benefit of its own police force and is served by an excellent volunteer fire department. Education of visitors concerning local laws and practices will also help with some safety issues. However, the geography of Duck, with NC 12 being the only through transportation artery will continue to result in traffic conflict situations.

B. Management Topics and Issues, Problems, and Assets

CAMA guidelines require a description of land use and development related issues in terms of the Coastal Resources Commission's major management topics: **public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.** Growth and development related issues identified by the Town should be cognizant of these management topics. Issues identified by Duck include:

Atlantic Ocean Shoreline
Beach Driving
Beach Re-nourishment and Maintenance
Commercial Development
Community Appearance
Currituck Sound Shoreline

Development Design Standards
 Duck Trail
 Federal Properties
 Intergovernmental Relations
 Overhead Utility Lines
 Parking and Loading/Off-loading Areas
 Public Safety
 Redevelopment
 Residential Development
 Septic Tank Use
 Sexually Oriented Businesses
 Solid Waste Management
 Storm Water Management
 Tourism
 Town Commons Area
 Transportation
 Uses of and Activities In and On Ocean and Sound Waters

Management topics and Town issues are examined relative to problems or obstacles that may prevent the Town from achieving goals. Problem statements are not intended to state or imply solutions; that comes later in the planning process. Issues are also examined relative to assets that may be available to Duck to assist it in addressing its goals. Assets are opportunities or resources (features, facilities, organizations, and programs) that can be cited by the plan to help the Town address its goals.

1. Atlantic Ocean Shoreline

The issue facing the Town is how to preserve and protect this resource and ensure future generations are able to enjoy its beauty and bounty and can continue to use the beach and water for active and passive recreation and leisure activities. This issue is related to the following State management topic(s): public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

Lack of local (Town) resources (technical and financial); magnitude of effort required to police, manage, preserve, and protect the ocean beach and waters; and, degradation of the resource resulting from litter, pollution, and undesirable activities conducted on and off-shore.

Features, facilities, organizations, and programs that may assist the Town include:

State, County, and Federal agencies, programs, and regulations are the main assets available to the Town to address this issue. The Town will enforce its ordinance prohibiting beach fires and open burning.

2. Beach Driving

The issue facing the Town is how to regulate beach driving. This issue is related to the following State management topic(s): public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

The Town should not encounter problems or obstacles addressing this issue.

Features, facilities, organizations, and programs that may assist the Town include:

The Town will rely on its police department to enforce the beach driving ordinance thereby addressing this issue. The make-up of beach sand in the Duck area is largely shale which does makes beach driving more treacherous and serves to deter some drivers who might otherwise drive on the beach.

3. Beach Re-nourishment and Maintenance

The issue facing the Town is staying informed and involved relative to Federal, State, and/or regional studies and initiatives concerning beach re-nourishment and maintenance. This issue is related to the following State management topic(s): public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

The Town should not encounter problems or obstacles addressing this issue.

Features, facilities, organizations, and programs that may assist the Town include:

Citizens and local elected and appointed leadership will assist the Town as it monitors beach re-nourishment studies and initiatives.

4. Commercial Development

The issue facing the Town is how to support and direct the placement of commercial development in areas zoned for such activities and to encourage local support and patronage of Town businesses. This issue is related to the following State management topic(s): public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

Business closures/failures; divergent/conflicting interests within the business community; and, local, regional, and/or national economic downturns.

Features, facilities, organizations, and programs that may assist the Town include:

Citizens, local elected and appointed leadership, and the business community will work together to address this issue.

5. Community Appearance

The issue facing the town is how to remain aesthetically pleasing while maintaining its coastal village image and charm. This issue is related to the following State management topic(s): land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue:

Lack of development design standards; private initiatives that may be contrary to Town goals and efforts; and, lack of local (Town) financial and technical resources.

Features, facilities, organizations, and programs that may assist the Town include:

Citizens, local elected and appointed leadership, community civic and business associations and interests groups, and the development community will work together to address this issue. The Town will acquire technical expertise as it develops its staff and will use its police powers to ensure desirable development patterns in Town.

6. Currituck Sound Shoreline

The issue facing the Town is how to preserve, protect, and enhance this resource and ensure future generations are able to enjoy its beauty and bounty and can continue to use it for passive and active recreation and leisure activities. This issue is related to the following State management topic(s): public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

Lack of local (Town) financial and technical resources; magnitude of effort required to police, manage, preserve, and protect the Sound's shoreline and waters; degradation of the resource resulting from litter, pollution, and undesirable activities conducted on and off-shore; and, Sound erosion

Features, facilities, organizations, and programs that may assist the Town include:

State and Federal agencies, programs, and regulations are the main assets available to the Town to address this issue. The introduction of grasses and other natural stabilizing treatments may help the situation.

7. Development Design Standards

The issue facing the Town is how to develop and utilize development design standards to continue and enhance its desired development character. This issue is related to the following State management topic(s): land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

Lack of local (Town) technical resources; and, private initiatives that may be contrary to Town goals and efforts.

Features, facilities, organizations, and programs that may assist the Town include:

Citizens, local elected and appointed leadership, and the development community will work together to address this issue. The Town will acquire technical expertise as it develops its staff and will use its police powers to ensure desirable development in Town.

8. Duck Trail

The issue facing the Town is how to continue to maintain and enhance the Duck Trail to provide pedestrians and cyclists a safe alternative to walking and riding on public and private roads and to encourage the Trail's use. This issue is related to the following State management topic(s): public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

User apathy, ignorance, or contempt for established safety guidelines; funding for maintenance and major repairs if needed; and, increased traffic along NC 12 and potential for accidents involving pedestrians and vehicles.

Features, facilities, organizations, and programs that may assist the Town include:

Citizens (particularly Duck Trail volunteers), community civic and business associations and interest groups, homeowners associations, elected and appointed leadership, the North Carolina Department of Transportation, and the business community will work together to address this issue. Federal programs for drainage studies and improvements are available to the Town.

9. Federal Properties

The issue facing the Town is how to ensure that Federal properties are used in ways that are consistent with the Town's established growth patterns and image and to ensure that the Town has the opportunity to purchase all or part of Federal properties within its borders for use as a commons area or for other public uses. This issue is related to the following State management topic(s): public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

Potential for Federal decision makers to disregard or act contrary to Town goals and efforts, if/when properties are being considered for land use changes or during program development and implementation.

Features, facilities, organizations, and programs that may assist the Town include:

Citizens, community civic and business associations and interest groups, local elected and appointed leadership, and State and Federal elected representatives will work together to address this issue.

10. Infrastructure Carrying Capacity and Provision of Public Facilities and Services

The issue facing the Town is how to ensure that public systems and services are sized, located, and managed to protect or restore the quality of areas of environmental concern or other fragile areas while providing adequate levels of service to meet the needs of citizens. This issue is related to the following State management topic(s): public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

Lack of local (Town) technical and financial resources; and, balancing the needs of year-round and seasonal populations in planning for public facilities.

Features, facilities, organizations, and programs that may assist the Town include:

Local elected and appointed leadership, State and Federal elected representatives, Dare County, and service providers will work to address this issue.

11. Intergovernmental Relations

The issue facing the Town is how to interact with local governments in the region and State and Federal agencies on a routine basis to promote its interests and to make others aware of its positions on local, regional, State, and Federal issues. This issue is related to the following State management topic(s): public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

Regional, State, and/or Federal decision making processes that do not allow Town input will be the main problem or obstacle that will prevent the Town from addressing this issue.

Features, facilities, organizations, and programs that may assist the Town include:

Local elected and appointed leadership, State and Federal elected representatives and agencies, regional organizations, and membership/lobbying organizations such as the North Carolina League of Municipalities will work together to address this issue.

12. Land Use Compatibility

The issue facing the Town is how to ensure that development and use of land resources is consistent with the compatibility of the land to accommodate such development and uses. This issue is related to the following State management topic(s): public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

lack of local (Town) technical resources; and, private initiatives that may be contrary to Town goals and efforts.

Features, facilities, organizations, and programs that may assist the Town include:

Citizens, local elected and appointed leadership, and the development community will work together to address this issue. The Town will acquire technical expertise as it develops its staff and will use its police powers to ensure land use compatibility.

13. Natural Hazard Areas

The issue facing the Town is how to conserve protective functions of barrier dunes, beaches, flood plains, and other coastal features. This issue is related to the following State management topic(s): public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

Lack of local (Town) technical and financial resources; and, private initiatives that may be contrary to Town goals and efforts.

Features, facilities, organizations, and programs that may assist the Town include:

Citizens, local elected and appointed leadership, State agencies such as the North Carolina Department of Environment and Natural Resources, Division of Coastal Management, and Federal agencies such as the U.S. Army Corps of Engineers and Environmental Protection Agency will help the Town address this issue.

14. Overhead Utility Lines

The issue facing the Town is how to ensure overhead utility lines are placed underground. This issue is related to the following State management topic(s): land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

Lack of local (Town) financial resources.

Features, facilities, organizations, and programs that may assist the Town include:

Citizens, local elected and appointed leadership, North Carolina Dominion Power, and telephone and television utility providers will work together to address this issue.

15. Parking and Loading/Off-loading Areas

The issue facing the Town is how to ensure adequate parking and loading /off-loading areas for commercial and public land uses. This issue is related to the following State management topic(s): land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

Lack of land for additional parking and loading/off-loading areas; and, private property rights.

Features, facilities, organizations, and programs that may assist the Town include:

Citizens, local elected and appointed leadership, the business community, and the North Carolina Department of Transportation will work together to address this issue.

16. Public Access

The issue facing the Town is obtaining State funding and studying the development of public access facilities to maximize access to beach and sound waters while respecting private property rights and the character, image, and development patterns of Duck. This issue is related to the following State management topic(s): public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

Lack of Town-owned land for public access sites; and, lack of local (Town) financial and technical resources.

Features, facilities, organizations, and programs that may assist the Town include:

Citizens, local elected and appointed leadership, and the North Carolina Department of Environment and Natural Resources will work together to address this issue.

17. Public Safety

The issue facing the town is how to ensure safety of residents and visitors--on land and in water--and maintain the image of Duck as a family vacation destination. This issue is related to the following State management topic(s): public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

Lack of local (Town) financial resources; and, major increases in the seasonal population and lengthening of the traditional vacation season.

Features, facilities, organizations, and programs that may assist the Town include:

Citizens, local elected and appointed leadership, Ocean Rescue, the Duck Police Department, the Duck Volunteer Fire Department, Dare County Emergency Medical Services, the North Carolina Highway Patrol (State Police), and the Dare County Sheriff's Department will work together to address this issue.

18. Redevelopment

The issue facing the Town is monitoring and considering redevelopment proposals for consistency with Town land use and development goals. This issue is related to the following State management topic(s): public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

Lack of local (Town) technical resources; and, private development initiatives that are contrary to Town goals and efforts.

Features, facilities, organizations, and programs that may assist the Town include:

Citizens, local elected and appointed leadership, community civic and business associations and interest groups, and the development community will work together to address this issue. The Town will acquire technical expertise as it develops its staff and use its police powers to ensure redevelopment proposals are consistent with Town land use and development goals.

19. Residential Development

The issue facing the Town is how to ensure the continuance of established residential development patterns and ensure future development is in character with existing development with regard to size, lot coverage, architectural design, and construction materials and methods. This issue is related to the following State management topic(s): public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

Lack of local (Town) technical resources; and, private development initiatives that may be contrary to Town goals and efforts.

Features, facilities, organizations, and programs that may assist the Town include:

Citizens, local elected and appointed leadership, community civic and business associations and interest groups, and the development community will work together to address this issue. The Town will acquire technical expertise as it develops its staff and use its police powers to ensure residential development proposals are consistent with Town land use and development goals.

20. Septic Tank Use

The issue facing the Town is how to ensure that the performance of existing septic tank systems is monitored; that existing systems are properly maintained; and, that proposed systems are installed according to approved plans under the supervision of appropriate agencies. This issue is related to the following State management topic(s): land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

The Town should not encounter problems or obstacles addressing this issue.

Features, facilities, organizations, and programs that may assist the Town include:

The Town will rely on the Dare County Health Department to assist in addressing this issue.

21. Sexually Oriented Businesses

The issue facing the town is how to discourage and prohibit the establishment of sexually oriented businesses within its borders. This issue is related to the following State management topic(s): land use compatibility and infrastructure carrying capacity (and provision of public facilities and services).

Problems or obstacles that may inhibit the Town from addressing this issue include:

Private development initiatives that are contrary to Town goals and efforts.

Features, facilities, organizations, and programs that may assist the Town include:

The Town will enforce its ordinance (moratorium) regarding sexually oriented businesses.

22. Solid Waste Management

The issue facing the Town is how to ensure to efficient, economical collection and disposal of solid waste. This issue is related to the following State management topic(s): land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

Increased costs; and, greater demand on collection and disposal systems due to increased seasonal population.

Features, facilities, organizations, and programs that may assist the Town include:

The Town will continue to contract for solid waste collection and disposal services. The Town's elected and appointed leadership will monitor the demands placed on the system to determine if and when changes are needed.

23. Storm Water Management

The issue facing the town is obtaining funding and technical assistance in developing a storm water management plan and implementing infrastructure/system improvements. This issue is related to the following State management topic(s): land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

Lack of local (Town) financial and technical resources; extent and patterns of existing development; private initiatives that may be contrary to Town goals and efforts; and, balancing private property rights and the benefits of public storm water management systems.

Features, facilities, organizations, and programs that may assist the Town include:

Local elected and appointed leadership, community civic and business associations and interest groups, the development community, the North Carolina Department of Transportation, and the North Carolina Department of Environment and Natural Resources, Division of Coastal Management will work together to address this issue. Federal programs for drainage studies and improvements are available to the Town.

24. Tourism

The issue facing the Town is how to promote itself as a family oriented tourist destination. This issue is related to the following State management topic(s): public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

Storms and natural disasters; and, local, regional, and/or national economic downturns.

Features, facilities, organizations, and programs that may assist the Town include:

Citizens, local and elected leadership, groups and agencies such as the Outer Banks Visitors Bureau, and the business community will work together to address this issue.

25. Town Commons Area

The issue facing the Town is the creation of a public commons area which could be used as an open space, community gathering area, and a site for passive recreation. This issue is related to the following State management topic(s): public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

Lack of local (Town) financial resources; and, cost and availability of lands.

Features, facilities, organizations, and programs that may assist the Town include:

Citizens, local elected and appointed leadership, and the development community will work together to address this issue. State and Federal programs and grants for land acquisition are available to the Town.

26. Transportation

The issue facing the Town is how to ensure the provision of a safe, efficient transportation system given State and local finances, topography, geography, and natural systems and surrounding land uses and development. This issue is related to the following State management topic(s): public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

There is only one through road (NC 12) in Town; development patterns preclude road widening or realignment projects that might serve to ease traffic congestion through Town; construction of a bridge connecting mainland and coastal Currituck County is years away at best; and, lack of agreement or commitment on the construction of a mid-county bridge.

Features, facilities, organizations, and programs that may assist the Town include:

Citizens, local elected and appointed leadership, community civic and business associations and interest groups, State and Federal representatives, and the North Carolina Department of Transportation will assist the Town in addressing this issue. Private trolley service providers could provide public transportation in Duck.

27. Uses of and Activities In and On Ocean and Sound Waters

The issue facing the Town is how to ensure the safe and environmentally friendly use of the waters of the ocean and sound by residents and visitors alike. This issue is related to the following State management topic(s): public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

Lack of local (Town) financial and technical resources; and, magnitude of effort required to police ocean and sound waters.

Features, facilities, organizations, and programs that may assist the Town include:

Citizens, local elected and appointed leadership, the Duck Police Department, Ocean Rescue, the Dare County Sheriff's Department and State and Federal agencies and programs will assist the Town in addressing this issue.

28. Water Quality

The issue facing the Town is how to maintain, protect, and restore the quality of coastal waters. This issue is related to the following State management topic(s): public access, land use compatibility, infrastructure carrying capacity (and provision of public facilities and services), natural hazard areas, and water quality.

Problems or obstacles that may inhibit the Town from addressing this issue include:

Lack of local (Town) financial and technical resources; magnitude of effort required to police, manage, preserve, and protect water quality; and, degradation of the resource resulting from litter, pollution, and undesirable activities.

Features, facilities, organizations, and programs that may assist the Town include:

State and Federal agencies, programs, and regulations are the main assets available to the Town to address this issue. The Dare County Health Department does some limited monitoring of water quality.

C. Town Vision

The vision statement has two main planning purposes. It provides a foundation for setting priorities, defining goals, and developing land use policies to achieve them. It also allows Duck to build consensus among various stakeholders on a unified approach to its land use and development issues. Through its vision statement, Duck describes what it wants to be and how it wants to look in the future. The Duck vision statement:

- is developed using information about driving forces, priority issues, and citizen values and aspirations concerning what Duck should look like in the future;
- is written in positive terms and in the present tense;
- includes a description of how the Town will look in the future;
- is not be time-bound and extends beyond the horizon of the land use plan;
- is not lengthy, but provides for goals and policies developed as a part of the land use plan;
- is tailored to Duck; and,
- is endorsed by the Duck Town Council.

DUCK VISION STATEMENT

The Town of Duck desires to remain a slow paced, coastal village and family oriented vacation destination. The Town seeks to maintain its charm and character. It will accomplish these objectives by: balancing residential and commercial land uses; protecting and preserving view sheds; protecting and preserving the natural environment and the waters of the ocean and sound; and, discouraging over-commercialization and intensive land use developments that are not compatible with the Town's residential nature and established development patterns.

1. Desired General Physical Appearance and Form

The continuation of its present physical appearance and form is important-if not critical-to the Town if it is to maintain its unique character among coastal villages. Development patterns are well established. Redevelopment proposals which seek to build "higher and closer" will challenge the Town with respect to maintaining and enhancing its desired physical appearance and form. Architectural design standards and development review processes are tools that may aid the Town. The Town must work to educate citizens and the development community with respect to its desired physical appearance and form.

2. General Land Use Plan Objectives

The land use plan should help the Town:

- preserve its character as a coastal village;
- protect and preserve the natural environment;
- provide adequate public facilities and services;
- achieve support and consensus for Town initiatives;
- promote unity in its residential and commercial communities; and,
- make infrastructure improvements that compliment but do not duplicate existing systems.

Chapter III: Population, Housing, and Economy

A. Introduction

The study of population, housing, and economy provides a foundation for land use planning and for planning of capital improvements and infrastructure improvements. This chapter describes the present nature of the Town's population, estimates its peak seasonal population, and some of the impacts of seasonal population surges. Projections of future population growth are not provided by the State at the town level. However, the population of Duck is expected to grow. As the permanent population increases, so too will the pressures the Town will face with respect to land use decisions and the provision of services.

The Town's current housing situation is also examined. Population characteristics (and growth in a community) go hand in hand with the types of dwellings that are demanded. The Town's economy is also shaped by the wishes of the residents and residential landscape they inhabit. Significant housing and commercial redevelopment proposals are likely in the next decade.

To fairly and effectively deal with such proposals, the Town must understand its make-up of people, housing, and economy. Information presented here introduces a number of issues which are central to the land use plan. An understanding of these issues is necessary in order to effectively plan for the future. Land use planning must be sensitive to the characteristics of the population of a community, particularly since changes in a population create changing demands for housing, commercial services, and public facilities and services.

B. Population

Although Duck was not created as a political entity at the time Census 2000 was being conducted, census tract and block data from Dare County can be used to ascertain certain population characteristics. From Census 2000, Duck's population was calculated to be 448 persons. There were 233 females and 215 males. Duck's population consisted of 438 white persons, 5 black or African Americans, 4 American Indians, and 1 Pacific Islander.

Figures for Duck as a political entity were not generated by Census 2000. The area that is now the Town was included in Dare County figures, Census Tract 9701, Block Group 1, Blocks 1000 through 1041 and block 1054. Census tract 9701 also includes Southern Shores. Census 2000's Summary File 3, the most detailed of the Census reports, is based on sample data for most of the attributes reported for population, income, education, and housing. In many cases, sample data is not available at the block level. The NC State Demographer's office explains that much of the published data resulted from census information sampled from approximately 1/6 of the population (Census Bureau goal). Duck's population in 2000 was reported to be 448 people. If the

Census Bureau met its goal for extensive information from 1/6 of the population, only about 75 people in Duck might have been contacted to provide data for the sample. EXHIBIT A provides some of Census Tract 9701, Block Group 1's population characteristics.

**EXHIBIT III-A
DUCK, NORTH CAROLINA
SELECTED POPULATION CHARACTERISTICS FOR DARE COUNTY CENSUS TRACT
9701, BLOCK GROUP 1***

*Census Tract 9701, Block Group 1 includes Duck and part of Southern Shores. Duck is included in Blocks 1000 through 1041 and block 1054. In 2000, Tract 9701, Block Group 1 included 874 people. Of this total, 427(48.9%) were males and 447(51.9%) were females.

AGE RANGE	MALES	FEMALES
18 Years and Under	49 (11.5%)	50 (11.2%)
19 Years to 24 Years	15 (3.5%)	6 (1.3%)
25 Years to 44 Years	51 (11.9%)	60 (13.4%)
45 Years to 64 Years	174 (40.7%)	211 (47.2%)
65 Years and Over	138 (32.3%)	120 (26.8%)
MARITAL STATUS	MALES	FEMALES
Population Over 15 Years Old	393	410
Now Married	296	307
Never Married	51	39
Divorced/Widowed	46	64
SCHOOL ENROLLMENT	MALES	FEMALES
Population 3 Years and Older	421	444
Enrolled in Grade 8 and Lower	28	30
Enrolled in Grade 9 to Grade 12	6	15
Enrolled in College or graduate School	6	7
Not in School	382	392
EDUCATIONAL ATTAINMENT	MALES	FEMALES
Population 25 Years and Older**	363	389
Less Than 9 th Grade	5	5
9 th to 12 th Grade, No Diploma	13	2
High School Graduate	46	66
Some College, No Degree	73	114
Associate Degree	22	33
Bachelors Degree	130	105
Graduate or Professional Degree	74	64

SOURCE: US Census Bureau, Census 2000, Summary File 3. Data are not posted for blocks for most attributes and when available, are based on samples.

**Blacks and whites only.

The State estimates Duck's population in 2002 has grown by 33 persons to a total of 481 persons. Duck's seasonal population, like the other communities, swells from spring to fall each year, generally between Memorial Day and Labor Day.

The demand for public services and the impact on public facilities increases at a proportional rate as seasonal visitors arrive. The year-round population of Dare County, according to Census 2000, is 29,967. The seasonal population peak is approximately 200,000. Duck's portion of this figure, as discussed below, could be more than 14,600 persons.

Census 2000 recorded 2,068 total housing units in Duck. Today, there are over 2,400 housing units in the Town. According to Dare County, there were 2,423 housing properties (units) in Duck in January 2003. There were 1,960 single family detached residential structures, of which as many as 1,750 may be vacation houses. There were 463 units in multi-family developments (condominiums, townhouses, timeshares, and co-ownership properties) in Town, 122 units at The Sanderling, and 8 rooms at bed and breakfast businesses. Based on these figures, EXHIBIT III-B estimates Duck's seasonal population based on assumptions (provided in DCM's Technical Manual for Land Use Planning) about the number of visitors that could occupy different types of accommodations during a peak period in the tourist season.

**EXHIBIT III-B
DUCK, NORTH CAROLINA
ESTIMATED PEAK SEASONAL POPULATION**

TYPE OF ACCOMMODATION	ESTIMATED # OF UNITS	AVERAGE # OF PERSONS PER UNIT*	TOTAL PEAK POPULATION*
Single family detached residential structures	1,960	6.5	12,740
Multi-family developments	463	3.5	1,621
The Sanderling	122	--	254**
Inns and Bed and Breakfasts	8	2	16
TOTAL	2,553	--	14,631

SOURCE: Town of Duck Land Use Plan Committee. *Estimated. **Figures for the Sanderling Inn obtained from facility staff, based on 2.5 persons per 88 rooms and a maximum of 34 people in the facility's villas.

The non-peak periods have also grown increasingly popular, extending the tourist season or "shoulder season" from Easter to Thanksgiving. Also, property owners of the resort homes offered for short-term rentals often use their property for vacations during spring and fall months. During the winter months, Duck and the rest of Dare County reverts to its static population base, with reserve capacity for almost every public service. However,

even during winter months, there are occasional spikes in population due to three-day week-end holidays in January and February.

The major impact of the seasonal population is on the service delivery and infrastructure support. Water and other utility systems must be designed to meet the capacity needs of the peak demands but most of the time, operate at much less than peak demands. The most overstressed of the Duck infrastructure is the transportation system, primarily NC 12, particularly on rainy days that result in heavy traffic flows and result in traffic back-ups. The increased traffic affects the response times of emergency services. The increased number of emergency calls due to seasonal population surges also has an impact.

The spikes in seasonal population impacts on the quality of life of the permanent population as well, making daily activities somewhat more difficult. As the peak populations continue to increase with each passing season, there is a growing sentiment among some year-round residents of being overwhelmed by the number of visitors. However, most everyone realizes the importance of the tourism industry in Duck and Dare County and accepts the increased demands placed on the infrastructure. Revenues received from the tourist population can include occupancy tax, prepared meals tax, and retail sales tax. Such revenues offset the negatives to many residents who also recognize the benefits of having "clean" industry such as tourism.

The State does not project population growth for towns but it does provide projections for at the County level. Dare County's population on 2000 was 29,967 persons and Duck's population was 448 persons, or 1.5% of the County total. The State projects Dare County will grow to 33,324 persons by 2005. At 1.5% of this total, Duck's projected population in 2005 will be about 500 persons. The State projects Dare County will have 36,681 persons by 2010. At 1.5% of this total, Duck's population will be 550 persons. The Town's 2015 population could reach 597 persons. By 2020, the State projects Dare County will grow to 42,940 persons. At 1.5% of this total, Duck's population will be 644 persons.

C. Housing

As previously stated, Census 2000 recorded 2,068 total housing units in Duck. Today, there are an estimated 2,400 housing units in Town.

The primary land use in Duck is single family detached residential structures that are generally not the principal residences of the owners. In 2000, there were 1,960 single family detached dwellings. Since July 2003, the Town has issues 52 permits for single family detached dwellings. Census 2000 recorded a total of 2,068 housing units in Duck, of which 1,853 (89.60%) were vacant while 215 (10.40%) were occupied. Vacation homes are often made available for short-term rental during the summer months.

The number of total households in Duck in 2000 was also reported to be 215. The average household size was 2.1 persons. There were 137 married couple families in

Duck in 2000. Twenty (20) of these were households with (own) children under 18 years of age present. The balance of married couple households (117) were households with no (own) children under 18 years of age present.

There are several multi-family developments in Duck. These include: Portside, Barrier Island, Sea Colony, Duck Blind Villas, Plover, and Ocean Pines.

Vacant land in Duck is primarily limited to undeveloped lots in previously recorded subdivisions. In 1999, the largest remaining undeveloped tract, known as the Gard tract, was approved as a 131 1-lot subdivision called Four Seasons. EXHIBIT III-B lists the number of vacant and improved lots in Duck's recorded subdivisions. Although there are a couple of isolated tracts of 2-3 acres of undeveloped land, the land use pattern for Duck is now established pending redevelopment proposals.

One emerging trend has been the increase in the size of residential structures versus the existing residential development that had been a more traditional 3-bedroom, 2-bath "cottage". This concept has evolved into multiple bedrooms, multi-bathroom up-scale structures, many with individual pools.

These structures are largely marketed as rental resorts for short-term rental. This style of occupancy has generated issues pertaining to off-street parking, wastewater treatment capabilities, and general overcrowding.

In response to development pressures, the Town addressed the issue of regulating large structures in 2003-2004 by amending its zoning ordinance (Ordinance 03-07). By regulating large structures, the Town should not be adversely affected during the planning period by the proliferation of large structures. Assumptions of future seasonal housing needs are not based on the provision of large structures, but rather on continued utilization of the current available rental housing stock.

**EXHIBIT III-C
DUCK, NORTH CAROLINA
VACANT AND IMPROVED LOTS – RECORDED SUBDIVISIONS**

SUBDIVISION	LOT SIZE	VACANT	IMPROVED RESIDENTIAL
Amy Acres	20,000+	7	15
Bayberry Bluffs	10,000	3	67
Bayberry Bluffs W	10,000	11	36
Bias Shores Ph1	15,000	3	15
Bias Shores Ph2	15,000	16	18
Brindley Tract	15,000	0	2
CC Byrum	15,000	15	12
Caffeys Inlet	15,000	4	36
Carolina Dunes A	10,000	5	90
Carolina Dunes B	15,000	5	67
Carolina Dunes C	15,000	6	60
Duck Landing	15,000	6	51
Duck Ridge Shores 1	15,000	1	32
Duck Ridge Shores 2	15,000	6	20
Founders Ridge	15,000	8	1
Four Seasons 1	15,000	21	100
Four Seasons 2	15,000	9	8
Gulls Flight	15,000	2	19
Hunter Lots	15,000	0	2
Jay Crest	10,000	4	20
Linda Etheridge	15,000	1	2
Nor'Banks Inc.	15,000	1	1
Northpoint	15,000	2	0
Ocean Dunes	10,000	10	84
OceanCrest	15,000	9	44
Olde Duck Beach	15,000	2	24
Osprey	15,000	5	36
Osprey Ridge	15,000	20	0
Palmer Island Club	15,000	6	20
Port Trintie	15,000	1	32
Poteskeet	10,000	5	69
Poteskeet Village	10,000	8	38
Saltaire	15,000	7	47
Sand Dollar Shores	10,000	1	41
Sandhills	15,000	7	15
Sandy Ridge	15,000	3	21

EXHIBIT III-C continued
DUCK, NORTH CAROLINA
VACANT AND IMPROVED LOTS – RECORDED SUBDIVISIONS

Schooner Ridge	15,000	4	93
Sea Acres	15,000	1	30
Sea Colony	15,000	0	18
Sea Hawk	15,000	16	21
Sea Hawk South	15,000	11	31
Sea Ridge	15,000	9	30
Sea Pines	15,000	25	45
Ships Watch	15,000	1	52
Small, Small	15,000	2	2
Snow Geese Dunes	<10,000	4	38
Snow Geese South	<10,000	3	35
Sound Sea Village	<10,000	30	74
Station Bay Cove	15,000	9	16
Tides of Duck	15,000	1	7
Tuckahoe	15,000	3	81
West Winds	15,000	9	0
Wild Duck Dunes	10,000	4	24
Sanderling (all)	15,000	15	261
92 Individual lots	Varying size	19	27
TOTAL		386	1,356

Note: Minimum lot size increased to 15,000 square feet in 1982. Date of subdivision plat recordation on each of these subdivisions not verified. Figures are based on January 2003 tax files and do not include those structures that are still under construction and not certified for occupancy. EXHIBIT III-C reflects residential subdivisions.

SOURCE: Dare County Planning Department.

D. Economy

Census 2000 does not provide employment figures for Duck. The Town estimated that employment opportunities in Duck are primarily associated with retail trade; arts, entertainment, recreation, accommodations, and food services; and, finance, insurance, real estate, and rental and leasing.

In Duck, commercial development is limited to lands adjacent to and along NC 12. The “village commercial” district has established an identity for Duck due to the limited scope of permitted uses. Only retail and service related businesses necessary for the daily needs of the immediate village are permitted in the village commercial

district. The limited scope of uses in Duck also prevents destination-type attractions and has promoted the quaint village feel of Duck. In terms of commercial development, ordinance amendments have been adopted for the village commercial district in Duck to address the proportionality of commercial structures to the land use patterns of a village setting. The amendments limit per building floor area and establish lighting and some aesthetic standards for new development within the district.

There are other commercial areas in Duck north of the village commercial area. Generally, all are along NC 12 and include a variety of business types such as eating establishments, real estate firms, and outdoor recreation equipment suppliers. The Sanderling is in north Duck as well.

The tax revenues generated from real estate provide the vast majority of funding for Town services and programs. The Town's Fiscal Year 2002-03 budget estimates \$1.4 million (of a total estimated to be over \$1.7 million) in revenues will result from Ad Valorem taxes while utility taxes, ABC taxes, mixed beverage taxes, and beer and wine taxes will add \$140,840 more in revenues.

Chapter IV: Natural Systems

The analysis of natural systems is intended to describe and analyze the natural features and environmental conditions in Duck and to assess their capabilities and limitations for development. In the context of land use planning, environmental conditions describe the physical state of the Town's environment and fitness for development. Three specific dimensions are addressed: water quality, natural hazards, and natural resources. Capabilities and limitations are similar terms that may represent opposite sides of the same coin. Environmental capability is the capacity of land with a particular natural feature to accommodate a specified type or intensity of development. Similarly, an environmental limitation is a natural feature or group of features that places restraints on a specified type or intensity of development.

This chapter contains a three part analysis of the Town's natural features in order to assess conditions, capabilities, and limitations. Section A is an assessment of natural features present in Duck and interpretations of the capabilities or limitations that the features identified have for development. Section B builds from the interpretation of the capabilities and limitations of each natural feature category. Based on interpretation of their relative capabilities and limitations, natural features are combined into three categories (classes) on a single map (EXHIBIT IV-C Composite Environmental Conditions Map). Section C assesses environmental conditions in Duck relative to water quality, natural hazards, and natural resources.

A. Natural Features

Data files used to generate various natural features maps were provided by the State at the outset of the land use planning process. For Duck, natural features include: areas of environmental concern and environmentally fragile areas; soil characteristics; flood and natural hazard areas; storm surge areas; and, non-coastal wetlands and probable 404 wetlands.

1. Areas of Environmental Concern (AEC) and Environmentally Fragile Areas

One of the basic purposes of North Carolina's Coastal Area Management Act (CAMA) is to establish a State management plan that is capable of rational and coordinated management of coastal resources. The act recognizes that the key to more effective protection and use of the land and water resources of the coast is the development of a coordinated approach to resource management. The Coastal Area Management Act provides two principal mechanisms to accomplish this purpose. First, the formulation of local land use plans and, second, the designation of Areas of Environmental Concern (AEC) for the protection of areas of statewide concern within the coastal area. AEC are grouped into four broad categories. These are: estuarine and ocean systems, ocean hazard areas, natural and cultural resource areas, and public water supplies.

Included within the estuarine and ocean system are the following AEC categories: estuarine waters, coastal wetlands, public trust areas, and estuarine and public trust shorelines. Each of the AEC is either geographically within the estuary or, because of its location and nature, may significantly affect the estuarine and ocean system. Duck is impacted by all these estuarine and ocean system AEC categories which are found along the ocean and sound shoreline.

The next broad grouping is composed of those AEC that are considered natural hazard areas along the Atlantic Ocean shoreline where, because of their special vulnerability to erosion or other adverse effects of sand, wind, and water, uncontrolled or incompatible development could unreasonably endanger life or property. Ocean hazard areas include beaches, frontal dunes, inlet lands, and other areas in which geologic, vegetative and soil conditions indicate a substantial possibility of excessive erosion or flood damage. The ocean hazard system of AEC includes the following areas: ocean erodible areas, high hazard flood areas, inlet hazard areas, and unvegetated beach areas. Duck is impacted by all of these AEC.

The third broad grouping of AEC includes valuable small surface water supply watersheds and public water supply well fields. Public water supplies as a broad category include two AEC: small surface water supply watersheds and public water supply well fields. None of these AEC have been identified in Duck.

The fourth and final group of AEC is gathered under the heading of fragile coastal natural and cultural resource areas and is defined as areas containing environmental, natural or cultural resources of more than local significance in which uncontrolled or incompatible development could result in major or irreversible damage to natural systems or cultural resources, scientific, educational, or associative values, or aesthetic qualities. AEC within the fragile coastal natural and cultural resource category include coastal complex natural areas that sustain remnant species, unique coastal geologic formations, significant coastal architectural resources, and significant coastal historic architectural resources. None of these AEC have been identified in Duck.

2. Soil Characteristics

The soils in Duck belong to the general soil map unit Newhan-Duckston-Corrolla. These type major soils are used mainly for the recreational activities associated with beaches or for wildlife habitat. The sandy texture, seasonal droughtiness and wetness, and flooding of low areas during high-wind tides are the main limitations. These type of major soils generally are not used as cropland or woodland because of the seasonal droughtiness and wetness and the flooding during high-wind tides. The urban and recreational uses in areas of this unit are those associated with beach activities. All of the major soils in this unit have severe limitations for septic tank absorption fields. However, sound land planning and development, special site planning and current technology, can address some of the concerns associated with

soil limitations. The Dare County Health Department determines if soils will permit the use of septic tank systems on a case by case basis.

3. Flood and Other Natural Hazard Areas

Flood hazard areas are found along the entire length of Duck's ocean and sound shorelines. Development in these areas is subject to flood plain regulations.

4. Storm Surge Areas

Storm surge areas extend along the entire length of Duck's ocean and sound shorelines. In some areas, a fast hurricane storm surge would inundate entire parts of the Town.

5. Non-Coastal Wetlands and Probable 404 Wetlands

Some non-coastal wetlands are found in southeast Duck near the Southern Shores border. Coastal wetlands and NC Coastal Wetland Significance areas are found along the Currituck Sound shoreline, most notably in the area between NC 12 and the Sound extending from Plover Drive to the vicinity of Olde Duck Road. There is another area in north Duck west of NC 12 near the Sanderling Inn.

To analyze development capabilities and limitations, the Town profiled the features of its natural systems. The purpose of such a profile is to show the fit between natural features and the land uses and development activities associated with community development. The following questions helped construct the profile:

- Does the natural feature perform a function that is vital for environmental health and the quality of life of Duck residents?
- Does the feature constitute a consequential threat to people or property if development is located there?
- Does the feature provide a scenic amenity that is valued by the Town and that should be considered in the development of land use policies?
- Does the area contain rare outstanding elements of natural diversity of the Town or the State that merit special consideration as land use and development decisions are made?
- Do the characteristics of the feature materially limit the type or intensity of development that can take place without unacceptable environmental costs or significant investment in public facilities?

EXHIBIT IV-A lists natural features, using numbers to indicate the degree of development compatibility associated with each feature. Development includes all of the land use activities that are generally considered to be urban development: higher density residential, commercial and industrial uses, and availability of basic services.

**EXHIBIT IV-A
DUCK, NORTH CAROLINA
INTERPRETATION OF NATURAL FEATURES
DEVELOPMENT COMPATABILITY**

NATURAL FEATURES	DEVELOPMENT COMPATABILITY
AEC: Coastal wetlands	(3)
AEC: Estuarine waters	(2)
AEC: Estuarine shoreline	(2)
AEC: Public trust areas	(2)
AEC: Unvegetated beach area	(3)
AEC: Ocean erodible area	(3)
AEC: High hazard flood area	(2)
AEC: Inlet hazard area	(2)
SOILS: Septic limitations	(1)
SOILS: Erosion hazards	(1)
NON-COASTAL WETLANDS (NC-CREWS)	(2)
HAZARDS: Within 100-year flood	(2)
HAZARDS: Within storm surge area	(2)
WATER QUALITY	(2)

(1) Generally
Compatible

(2) Less
Compatible

(3) Least
Compatible

B. Environmental Conditions Composite

Based on the Town's interpretation of the capabilities and limitations of identified natural features, land in Duck has been generally classified into three categories. Class I is land that contains only minimal hazards and limitations that can be addressed by commonly accepted land planning and development practices. Class I land will generally support the more intensive types of land use and development. Class II is land that has hazards and limitations for development that can be addressed by restrictions on land uses, special site planning, or the provision of public services, such as water and sewer. Land in this class will generally support only the less intensive uses, such as low-density residential, without significant investment in services. Class III is land that has serious hazards and limitations. Land in this class will generally support very low-intensity uses such as conservation and open space.

The features that are included in each class are described in EXHIBIT IV-B Composite Natural Features Analysis. Classifications are not intended to prohibit or regulate land use and development. They serve to present a picture of natural systems' capabilities and constraints with respect to land use and development.

**EXHIBIT IV-B
DUCK, NORTH CAROLINA
COMPOSITE NATURAL FEATURES ANALYSIS**

CLASSIFICATION	MAPPING SYMBOL	NATURAL SYSTEM OPPORTUNITIES AND CONSTRAINTS
Class I – land containing only minimal hazards and having only slight limitations that may be addressed by sound land planning and development practices	I	Soils with limitations for septic tanks. Soils with slight erosion hazards. Non-wetland area or wetland rated beneficial and not high potential risk. Land located outside 100-year flood hazard area. Land located outside storm surge area (slow moving storm).
Class II – land containing development hazards and limitations that may be addressed by methods such as restrictions on types of land uses, special site planning, or provision of public services	II	Estuarine shoreline Ocean erodible area High hazard flood area Inlet hazard area Soils with moderate to severe limitations for septic tanks. Soils with moderate to severe erosion hazards. Non-coastal wetlands rated as beneficial and high potential risk or substantial significance. Land located within a 100-year flood hazard area. Land located within a storm surge area (slow moving storm).
Class III – land containing serious hazards for development of lands where the impacts of development would cause serious damage to the values of natural systems	III	Coastal wetland Estuarine waters Public trust areas Unvegetated beach area Non-coastal wetlands rated as substantial significance with high potential risk or exceptional significance with or without high potential risk.

EXHIBIT IV-C Composite Environmental Conditions Map shows the general locations of land classifications based on the composite natural features analysis. Class I lands, though possessing limitations for septic tank absorption systems, are located out of storm surge areas and flood hazard areas and do not include any non-wetland or wetland areas rated as beneficial. Although most of the soils in Duck, as reported in the Dare County Soils Study, are rated moderate or severe for septic tank absorption systems, sound land use planning and development, special site planning and development and current technology can address some of the concerns associated with soils' limitations. Class II lands are generally those found in storm surge areas, flood hazard areas and non-coastal wetlands rated as beneficial and high potential risk or substantial significance. Class III lands are generally coastal wetlands, non-coastal wetlands rated as substantial significance with high potential risk or exceptional significance without high potential risk, estuarine waters, public trust areas, and unvegetated beach areas.

C. Environmental Conditions Assessment

CAMA land use planning guidelines also require an assessment of three categories of environmental conditions or features: water quality, natural hazards, and natural resources. This information will be the basis for developing goals and policies to maintain and restore water quality, reduce vulnerability to natural hazards, and protect valuable natural resources.

1. Water Quality

a. Surface Water Quality

Basinwide water quality planning is a nonregulatory watershed-based approach to restoring and protecting the quality of North Carolina's surface waters. Basinwide water quality plans are prepared by the NC Division of Water Quality (DWQ) for each of the seventeen major river basins in the state. Each basinwide plan is revised at five-year intervals. While these plans are prepared by the DWQ, their implementation and the protection of water quality entails the coordinated efforts of many agencies, local governments, and stakeholders in the State.

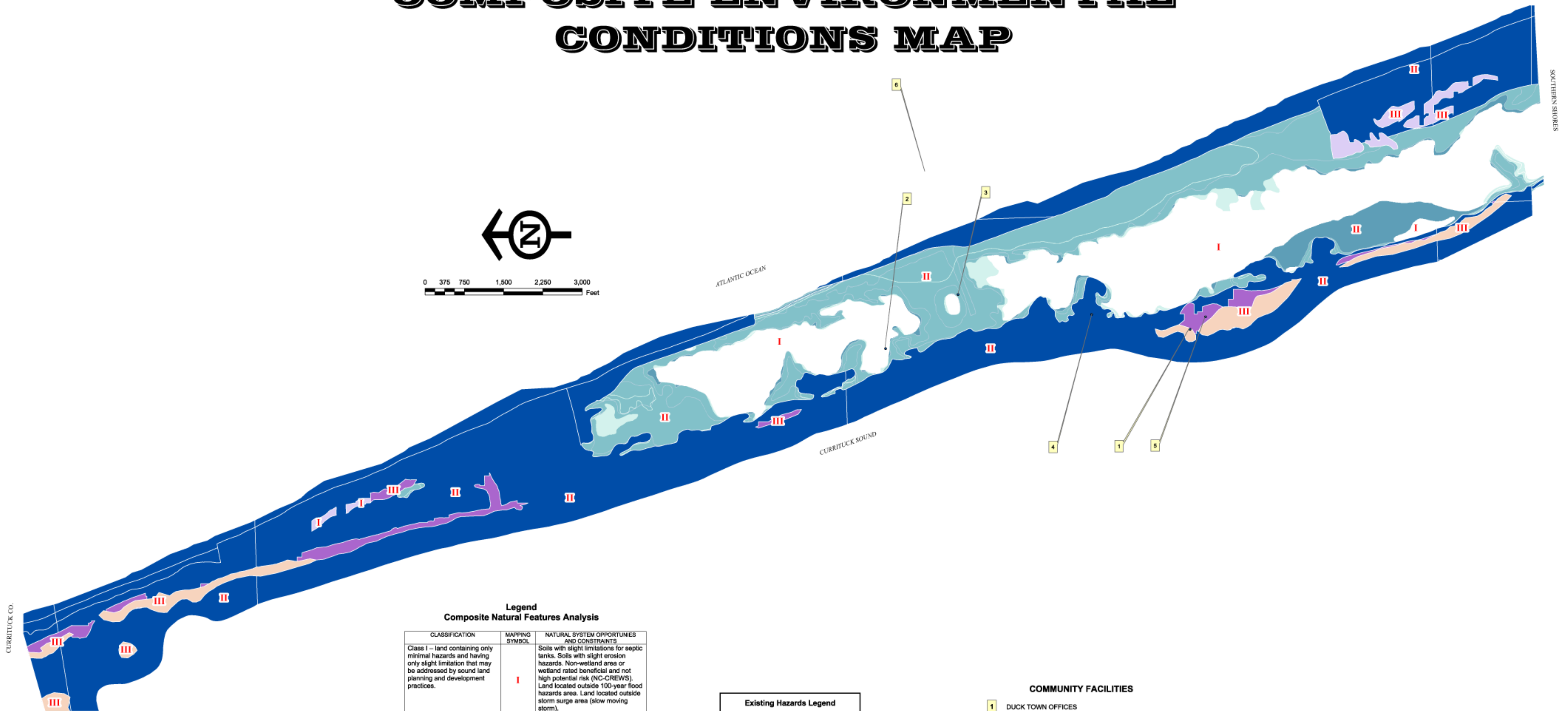
Duck is located within the Pasquotank River basin in subbasin 03-01-56. The 1997 basinwide plan for this basin completed in 1997 and was updated in 2002. The Pasquotank River basin encompasses 3,635 square miles of low-lying lands and vast open waters, including Albemarle Sound, in the state's northeast outer coastal plain. The basin includes all or portions of Camden, Chowan, Currituck, Dare, Gates, Hyde, Pasquotank, Perquimans, Tyrrell, and Washington counties. The basin also contains numerous small watersheds that drain into Albemarle, Currituck, Croatan, Roanoke and Pamlico Sounds.

EXHIBIT IV-C

DUCK, NORTH CAROLINA

COMPOSITE ENVIRONMENTAL

CONDITIONS MAP



Legend
Composite Natural Features Analysis

CLASSIFICATION	MAPPING SYMBOL	NATURAL SYSTEM OPPORTUNITIES AND CONSTRAINTS
Class I – land containing only minimal hazards and having only slight limitation that may be addressed by sound land planning and development practices.	I	Soils with slight limitations for septic tanks. Soils with slight erosion hazards. Non-wetland area or wetland rated beneficial and not high potential risk (NC-CREWS). Land located outside 100-year flood hazards area. Land located outside storm surge area (slow moving storm).
Class II – land containing development hazards and limitations that may be addressed by methods such as restrictions on types of land uses, special site planning, or provisions of public services.	II	Estuarine shoreline Ocean erodible area High hazard flood area Inlet hazard area Soils with moderate to severe limitations for septic tanks. Soils with moderate to severe erosion hazards. Non-coastal wetlands rated as beneficial and high potential risk or substantial significance (NC-CREWS). Land located within a 100-year flood hazard area. Land located within a storm surge area (slow moving storm).
Class III – land containing serious hazards for development of lands where the impacts of development would cause serious damage to the values of natural systems.	III	Coastal wetland Estuarine waters Public trust areas Unvegetated beach area Non-coastal wetlands rated as substantial significance with high potential risk or exceptional significance with or without high potential risk (NC-CREWS).

Existing Hazards Legend

■	FLOOD HAZARDS PROPERTIES
■	COASTAL WETLANDS
■	EXCEPTIONAL WETLANDS/NC CREWS
■	WETLANDS
■	HURRICANE STORM SURGE (FAST)
■	HURRICANE STORM SURGE (SLOW)
■	NON-COASTAL WETLANDS

- COMMUNITY FACILITIES**
- 1 DUCK TOWN OFFICES
 - 2 DUCK VOLUNTEER FIRE DEPARTMENT AND POLICE DEPARTMENT
 - 3 U. S. ARMY CORPS OF ENGINEERS FIELD RESEARCH FACILITY
 - 4 U. S. (DUCK, N.C.) POST OFFICE
 - 5 DARE COUNTY WATER TANK
 - 6 U. S. ARMY CORPS OF ENGINEERS RESEARCH PIER

The Pasquotank River basin is part of the Albemarle-Pamlico Estuarine system, the second largest estuarine system in the United States. In 1987, this estuarine system became part of the Environmental Protection Agency Estuary Program and was the subject of a major study known as the Albemarle-Pamlico Estuarine Study.

As previously noted, Duck lies within subbasin 03-01-56 of the Pasquotank River basin. This subbasin contains the highest population density (305 persons/square mile) in the entire Pasquotank River basin with the second highest density falling far behind at 80 persons/square mile. The subbasin has also undergone the highest rate of population density growth over the 1980-2000 period, growing from 130 persons/square mile to 305 persons/square mile.

Only one facility holds a NPDES minor permit in subbasin 03-01-56: Villas Association, Inc. The facility is nonmunicipal and discharges using an on-site land application method. This facility is not in Duck. There are no individual NPDES stormwater permits issued in the basin; however, there are two general stormwater permits issued.

In basinwide plans, surface waters are classified according to their best intended uses. Determining how well a water supports its designated uses (use support status) is an important method of interpreting water quality data and assessing water quality. Waters are rated fully supporting (FS), partially supporting (PS) or not supporting (NS). The terms refer to whether the classified uses of the water (i.e., aquatic life protection, recreation, and water supply) are being met. For example, waters classified for aquatic life protection and secondary recreation (Class C for freshwater and SC for saltwater) are rated FS if data used to determine use support did not exceed specific criteria. However, if these criteria were exceeded, then the waters would be rated as PS or NS, depending on the degree of degradation. Waters rated PS or NS are considered to be impaired. Waters lacking data, or having inconclusive data, are listed as not rated (NR).

The use support ratings for subbasin 03-01-56 are shown on EXHIBIT IV-D.

North Carolina's Water Quality Standards program adopted classifications and water quality standards for all the State's river basins in 1963. All surface waters are assigned a primary classification that is appropriate to the best uses of that water. Surface waters may also be assigned supplementary classifications. Class SA waters are waters classified for commercial shellfish harvesting. Class SA waters are by definition classified as high quality waters (HQWs). Fecal coliform bacteria in Class SA water shall meet the current sanitary and bacteriological standards as adopted by the Commission for Health Services. Domestic wastewater discharges are not allowed in these waters, and additional provisions for stormwater control are required. There are 20,487.9 acres of Class SA waters in subbasin 03-01-56 that were assessed in the shellfish harvesting use support category. In this subbasin, 1,712.9 acres (8.4%) are considered impaired for the shellfish harvesting use support category.

**EXHIBIT IV-D
DUCK, NORTH CAROLINA
USE SUPPORT RATINGS (2000) FOR MONITORED AND
EVALUATED** STREAMS (MILES) IN PASQUOTANK RIVER
SUBBASIN 03-01-56**

Use Support Category	FS	PS	NS	NR	Total*
Aquatic Life/ Secondary Recreation**	12,463.2 estuarine ac	0	0	15,830.2 estuarine ac 23.8 fresh ac 34.2 coastal mi	28,293.5 estuarine mi 23.8 fresh ac 34.2 coastal mi
Fish Consumption***	0	34.2 coastal mi	0	0	34.2 coastal mi
Primary Recreation	12,851.8 estuarine ac 34.2 coastal mi	0	21.4 estuarine ac	15,411.9 estuarine ac	28,285.1 estuarine mi 34.2 coastal mi
Shellfish Harvesting	18,775.0 estuarine ac	0	1,712.9 estuarine ac	0	20,487.0 estuarine ac

* Total stream miles/acres assigned to each use support category in this subbasin. Column is not additive because some stream miles are assigned to more than one category.

** For the fish consumption use support category, only monitored stream miles are presented.

*** These waters are impaired because of a regional fish consumption advisory.

SOURCE: Pasquotank River Basinwide Water Quality Plan, July 2002.

Nursery areas are defined as those areas in which for reasons such as food, cover, bottom type, salinity, temperature and other factors, young finfish and crustaceans spend the major portion of their initial growing season. Primary Nursery Areas are those areas in the estuarine system where initial post-larval development takes place. Secondary Nursery Areas are those areas in the estuarine system where later juvenile development takes place. Populations are usually composed of developing sub-adults of similar size, which have migrated from an upstream Primary Nursery Area to the Secondary Nursery Area located in the middle portion of the estuarine system. [NCAC 15A 3N. 0102]. The North Carolina Marine Fisheries Commission (MFC) adopted regulations in 1977 to protect these nursery areas as defined above.

The importance of nursery areas to finfish and invertebrate production is recognized by the State and the Town. Duck is bordered by Currituck Sound and the Atlantic Ocean. Both of these water bodies are extremely important to fisheries production and support significant commercial and recreational fisheries.

Based on DMF license data, there are 1,059 Standard Commercial Fishing License holders in Dare County. During the past year, 536 of these license holders sold seafood. Also based on DMF data, there are 89 licensed seafood dealers in the County. Dare County commercial landings consistently rank first or second in the state (1994-2001 ranging from 32-44 million pounds annually, with a dockside value ranging from \$22-28 million annually).

Dare County supports the largest amount of recreational effort in the state, with out of state residents accounting for approximately 70% of the total. The importance of recreational fisheries should be acknowledged. There are 255 Recreational Commercial Gear License holders in Dare County. Recreational Commercial Gear License holders are allowed to use a limited amount of commercial gear, the catch cannot be sold and must abide by creel limits and size limits.

Currituck Sound functions as a nursery area for spot, croaker, weakfish, flounder, spotted seatrout, white perch, catfishes, blue crabs and other commercially and recreationally important species. Commercial and recreational fishermen pursue a host of these species. The nearshore waters of the Atlantic Ocean are utilized by various finfish species, not only juveniles but also adults. Recreational and commercial fisheries are prosecuted in these areas as well.

Submerged aquatic vegetation (SAV) is found throughout Currituck Sound. SAV habitat is not only important to finfish and invertebrate species previously mentioned but also utilized by various forage species. SAV's are one of the critical habitat types defined by the North Carolina Marine Fisheries Commission (MFC) [NCAC 15A 31.0101(20)(A)].

Wetlands are of great importance to fisheries production serving as sources of biological productivity, directly and indirectly, nursery areas and reducing sedimentation/turbidity to improve water quality.

There are 34.2 Atlantic coastal miles in subbasin 03-01-56 which are partially supporting that were monitored for fish consumption. All waters in this subbasin are currently partially supporting (PS) on an evaluated basis for the fish consumption use support category because of a regional fish consumption advisory for shark, swordfish, king mackerel, tilefish, largemouth bass, bowfin (or blackfish), and chain pickerel (or jack).

Only a small portion of the subbasin's water (21.4 estuarine acres in the Roanoke Sound) is currently not supporting primary recreation. These waters are in the Roanoke Sound and none border Duck.

The surface waters in the subbasin containing Duck are fully supporting designated uses or are not rated based on recent DWQ monitoring.

Subbasin 03-01-56 has undergone a great increase in population between 1980-2000. Growth management within the next five years will be imperative in order to maintain good water quality in this subbasin. Growth management can be defined as the application of strategies and practices that help achieve sustainable development in harmony with the conservation of environmental qualities and features of an area. On a local level, growth management often involves planning and development review requirements that are designed to maintain or improve water quality.

The Environmental Sciences Branch of DWQ collects a variety of biological, chemical and physical data to assess water quality. Since 1995, DWQ has not conducted any fish tissue surveys in the Pasquotank River basin. However, there are currently fish consumption advisories in the basin. DWQ has systematically monitored and reported fish kill events across the State since 1996. Field reports since 1996 have generally shown light fish kill activity (ten or less events) in the Chowan River and Pasquotank River basins each year.

Pasquotank River subbasin 03-01-56 consists of the lower portions of Currituck Sound, outer Albemarle Sound, Kitty Hawk Bay, and the eastern Roanoke Sound in Dare County. According to the 2002 Pasquotank River Basinwide Water Quality Plan, DWQ did not collect any benthic microinvertebrate, fish community, fish tissue, or ambient water quality data in this subbasin. Water quality use support determinations are based on fish consumption advisories, DEH sanitary surveys, water treatment plant operator reports, and recreational waters testing.

There are 34.2 Atlantic coastal miles which are partially supporting that were monitored for fish consumption. All waters in subbasin 03-01-56 are currently partially supporting (PS) on an evaluated basis for the fish consumption use support category because of a regional fish consumption advisory for shark, swordfish, king mackerel, tilefish, largemouth bass, bowfin (or blackfish), and chain pickerel (or jack). The portion of Roanoke Sound (21.4 estuarine acres) around the Villa Association, Inc. outfall in Nags Head, is currently not supporting primary recreation. DEH Recreational Water Quality issued a swimming advisory for a portion of Roanoke Sound centered around the Villas Association, Inc. direct discharge. The advisory closure due to rule had been posted since 1998. Villas Association, Inc. exceeded its ammonia limits by over 40 percent over the last quarter of 1998 and the first quarter of 1999.

There are 20,487.9 acres of Class SA waters in this subbasin that were assessed in the shellfish harvesting use support category. In this subbasin, 1,712.9 acres (8.4%) are considered impaired for the shellfish harvesting use support category.

According to the 2002 Pasquotank River Basinwide Water Quality Plan, subbasin 03-01-56 contains portions of three DEH Growing Areas: H1, H6, and I2. DEH Growing Area H1 contains the waters of the Roanoke Sound. The DEH Growing Area overlaps several subbasins, and DWQ has improved its reporting methodology to

provide area closure information by subbasin. Waters currently prohibited for commercial shellfish harvesting include portions of Roanoke Sound, Pond Island and Rockhall Creek. Contamination sources included nonpoint source pollution from adjacent land uses. Analysis of the bacteriological data for the DEH Growing Area indicated that little change in water quality occurred throughout the area during 1993-1999.

The waters of Kitty Hawk Bay are closed to shellfish (mollusks and bi-valves) harvesting. Also, commercial and recreational blue crab fisheries occur in the Kitty Hawk Bay.

Public health hazards have been identified in the Pasquotank River basin. The NC Department of Health and Human Services (NCDHHS) has developed guidelines to advise people to what fish are safe to eat. DWQ considers uses of waters with a consumption advisory for one or more species of fish to be impaired. Elevated methylmercury levels have been found in shark, swordfish, king mackerel, tilefish, largemouth bass, bowfin (or blackfish), and chain pickerel (or jack). As of April 2002, these fish are under an advisory.

According to the 2002 Pasquotank River Basinwide Water Quality Plan, there are 395,371.3 acres of shellfish harvesting waters (Class SA) in the Pasquotank River basin. There are 5,033.3 (1.3%) acres currently rated as impaired in the shellfish harvesting use support category. Many of the impaired waters are in areas that have a high value shellfish resource. The following sections describe programs that monitor shellfish harvesting waters, methods for determining use support in class SA waters, and recommendations for addressing impairment class SA waters.

There are 390,338.0 acres of shellfish harvesting (Class SA) waters that are classified as approved by DEH Shellfish Sanitation in the Pasquotank River basin. These areas are always open to shellfish harvesting and close only after heavy rainfall events such as hurricanes. As of 2001, there were no Conditionally Approved-Open or Conditionally Approved-Closed shellfish harvesting waters in the Pasquotank River basin.

There are 5,033.3 acres of shellfish harvesting (Class SA) waters that are prohibited or restricted for shellfish harvesting in the Pasquotank River basin. Most of these areas receive runoff that consistently results in fecal coliform bacteria levels above the state standard. As noted above, the sources of fecal coliform bacteria may be many. DEH Shellfish Sanitation shoreline surveys attempt to identify possible sources. In many areas, the contamination may be from several different sources at different times of the year including, but not limited to, adjacent development and marinas.

Dioxin has prompted an advisory since March 2001 in the Albemarle Sound from Bull Bay to Harvey Point, west to the mouth of the Roanoke River and north to the mouth of the Chowan River at the US Highway 17 Bridge. Weyerhaeuser Company, located at

the mouth of Welch Creek in the Roanoke River basin, previously discharged directly to the creek. During the 1980's, officials recognized that dioxin, a carcinogenic by-product of the chlorine bleaching process, was accumulating in fish tissue. In 1988, Weyerhaeuser made improvements and relocated the discharge to the Roanoke River. Weyerhaeuser is required by DWQ to provide extensive monitoring in the Roanoke River from Williamston down the Roanoke and out into the Albemarle Sound as far as Bull Bay. Data recently collected by Weyerhaeuser Company indicate a decline in dioxin concentrations. In October 2001, the advisory was partially lifted for game fish. However, an advisory remains in place for bottom-dwelling fish such as carp and catfish.

Recognizing the critical importance of healthy and productive habitats to produce fish for human benefits, the North Carolina General Assembly included a provision in the Fisheries Reform Act of 1997 instructing the Department of Environment and Natural Resources (DENR) to prepare Coastal Habitat Protection Plans (CHPPs). The legislative goal of the plans is long-term enhancement of coastal fisheries associated with each habitat.

At the time of this writing, a draft North Carolina Coastal Habitat Protection Plan (September 9, 2004) has been released for public review. The plan will be finalized in July 2005. It can be viewed at <http://www.ncfisheries.net>.

The primary focus of the plan is describing habitats for coastal fisheries resources in eastern North Carolina, threats to those habitats, and management actions to address those threats. The CHPP identifies four goals for protection of coastal fisheries habitat:

1. Improve effectiveness of existing rules and programs protecting coastal fish habitats
2. Identity, designate, and protect all Strategic Habitat Areas
3. Enhance habitat and protect it from physical impacts
4. Enhance and protect water quality

The Town should stay informed as to the plan's review and approval and how the document may help to improve water quality.

b. Shellfish Waters

The North Carolina Department of Health, Shellfish Sanitation Section protects the consuming public from shellfish and crustacean which could cause illness. Rules and regulations following national guidelines have been implemented to ensure the safety of harvesting waters and the proper sanitation of establishments that process shellfish and crustacean for sale to the general public.

The Pasquotank River basin contains many prohibited shellfish harvesting areas, which are now given a use support rating of not supporting (NS) shellfish harvesting based on the DEH designation. This use support rating differs significantly from the historical use support ratings of partially supporting (PS) for prohibited shellfish harvesting areas. Of the 395,371.3 acres of monitored streams in the entire Pasquotank River basin, 98.7% (390,338.0 acres) are rated as fully supporting while only 1.3% (5,033.3 acres) were rated as impaired.

Waters in subbasin 03-01-56 currently prohibited for commercial shellfish harvesting include portions of Roanoke Sound, Pond Island, and Rockhall Creek. Contamination sources included nonpoint source pollution from adjacent land uses. Again, none of these waters border Duck.

c. Chronic Wastewater Treatment System Malfunctions

There are no central public wastewater treatment plant systems in Duck or its environs.

d. Public Health Hazards

The Dare County Health Department was contacted to identify any subdivisions in Duck experiencing septic tank problems and to identify areas in Town experiencing chronic septic system problems. Department staff advised that cases were evaluated as applications were received and processed. The on-site inspections that are subsequently conducted would reveal what, if any building size limitations would be imposed or what special steps would be required.

2. Natural Hazards

a. Storm Hazards and Floods and Wind Damage Estimates

Property damage in Duck resulting from storms occurs primarily along the Atlantic Ocean shoreline and areas adjacent to NC 12. The Town has requested that the State Department of Emergency Services supply repetitive loss data for properties in the Town, but no information has been provided as of this writing. Property losses due to recent hurricanes has been noted by the Town, including minimally damaged structures, downed trees, standing flood waters, and power outages.

b. Shoreline Erosion

At present, no database is available for structures and facilities threatened by shoreline erosion. The Division of Coastal Management provides very general mapping that shows long term shoreline erosion rates. See EXHIBIT IV-E on page IV-16.

As it developed this land use plan, the Town identified erosion “hot spots” including areas in or near Caffey’s Inlet, Gulls Flight, Sound Sea Village, Ocean Pines, Sanderling, and Duck Post Office.

3. Natural Resources

a. Natural Heritage Areas

The potential for development in many areas of Duck, particularly areas in and adjacent to natural hazard areas is extremely limited due to poor soils, abundant wetlands, and publicly held lands.

Digital mapping provided by the Division of Coastal Management do not designate or identify any natural heritage areas in Duck. However, several public lands and Significant Natural Heritage Areas occur in Pasquotank River subbasin 03-01-56, including Jockey’s Ridge State Park, Nags Head Woods Preserve, Run Hill State Natural Area, Wright Brothers National Memorial, and Kitty Hawk Woods Coastal Reserve.

The North Carolina Natural Heritage Program is a part of the Office of Conservation and Community Affairs within the NC Department of Environment and Natural Resources. The program inventories catalogues, and facilitates protection of the rarest and the most outstanding elements of the natural diversity of the State. These elements of natural diversity include those plants and animals which are so rare or the natural communities which are so significant that they merit special consideration as land-use decisions are made.

North Carolina is home to approximately 5,700 species of plants, more than 700 species of vertebrates, and more than 10,000 species of invertebrates. The Natural Heritage Program has been able to identify and to develop lists of those plants and animals which are most rare and, thus most in need of protection, by working closely with experts from across the state and in cooperation with the U.S. Fish and Wildlife Service, the Plant Conservation Program of the N.C. Department of Agriculture and Consumer Services and the Nongame and Endangered Wildlife Program of the N.C. Wildlife Resource Commission.

The NC Natural Heritage Program tally the elements of natural diversity (rare plants and animals, rare and exemplary natural communities, and special animal habitats) known to occur in all North Carolina counties and according to USGS 7.5-minute quadrangles. The information on which these lists is based comes from a variety of sources, including field surveys, museums, herbaria, scientific literature, and personal communications. These lists are dynamic, with new records continually being added and old records being revised as new information is received.

Current lists for the quadrangles that cover Duck and its environs can be accessed at <http://www.ncsparks.net/nhp/search.html>. The quadrangles are: Corolla, Kitty Hawk, Jarvisburg, Martin Point, and Mossey Islands. Lists for each of these quadrangles can be accessed. A variety of birds, reptiles, fish, vascular plants, natural communities and special habitats are listed

b. Mineral Resource Areas and Productive Soils

The North Carolina Department of Natural Resources, Division of Land Resources monitors mining activities and serves as the State's issuing agency for mining permits. At the time of this writing, the Division reports that eleven mining operations are currently permitted in Dare County. Some of the permitted operations are currently inactive. Currently, there are no permitted mining operations in Duck.

The Division reports that as of April, 2003, no applications have been submitted this year for permit renewals, new mining operations, or changes to existing permitted operations.

According to the 1992 Soil Survey of Dare County, North Carolina, none of the soils present in Duck are suited for crop production.

Kitty Hawk to Corolla

Long Term Average Annual Shoreline Change Rates Updated Through 1992

North Carolina

Division of Coastal Management

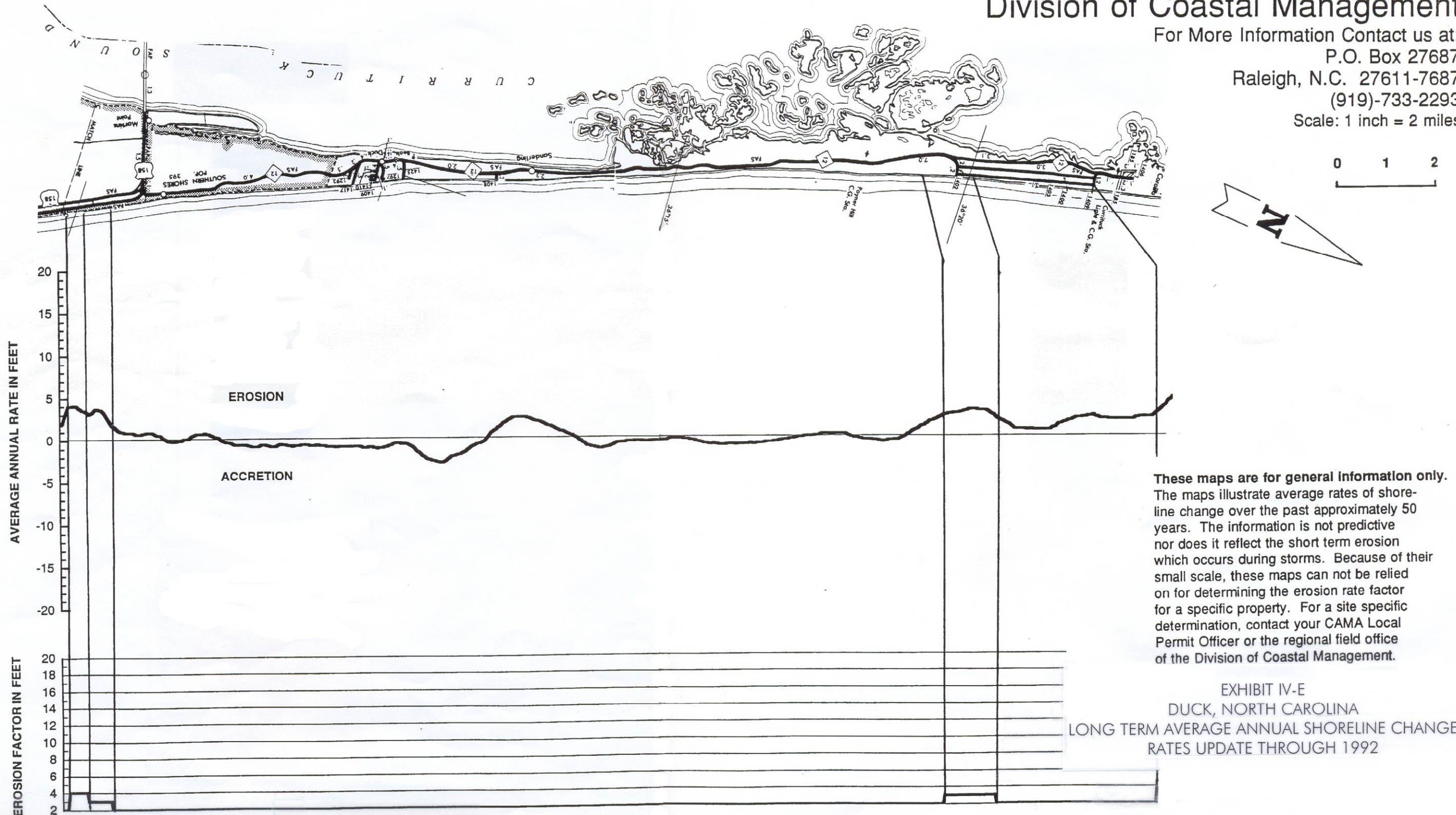
For More Information Contact us at:

P.O. Box 27687

Raleigh, N.C. 27611-7687

(919)-733-2293

Scale: 1 inch = 2 miles



These maps are for general information only. The maps illustrate average rates of shoreline change over the past approximately 50 years. The information is not predictive nor does it reflect the short term erosion which occurs during storms. Because of their small scale, these maps can not be relied on for determining the erosion rate factor for a specific property. For a site specific determination, contact your CAMA Local Permit Officer or the regional field office of the Division of Coastal Management.

EXHIBIT IV-E
DUCK, NORTH CAROLINA
LONG TERM AVERAGE ANNUAL SHORELINE CHANGE
RATES UPDATE THROUGH 1992

06-09-03

SOURCE: North Carolina Division of Coastal Management.

Chapter V: Land Use and Development

The analysis of land use and development provides the Town with a snap shot of current land use patterns, an assessment of emerging development trends, and a forecast of the location of future development, given current trends. Existing land use is a major part of the foundation upon which land use policies and the future land use maps are built. The land use information developed in the part of the plan serves several purposes. Some of these include helping develop policies that address land use conflicts; establishing relationships between land use and development and water quality; identifying areas where land use is in transition; and identifying areas where in-fill development or redevelopment are feasible.

A. Existing Land Use

1. Land Use Categories

CAMA guidelines require the collection of data on existing land uses and the provision of a map of the land use categories and activities. EXHIBIT V-A describes the land use categories applicable to Duck. EXHIBIT V-B shows the existing land uses and locations of community facilities in Duck.

EXHIBIT V-A DUCK, NORTH CAROLINA EXISTING LAND USE CATEGORIES

Existing Land Use Category	Land Use Activities
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Single Family Residential	Single family residential structures
Multi-Family Residential	Apartments, condominiums, town houses
Commercial	General and specialty retail, convenience stores, personal services, professional services and offices, and mixed uses, motels and hotels, bed and breakfast establishments
Institutional	Churches, publicly held lands
Undeveloped	Land in an idle state and not used for any open-space function

There are no agricultural, forestry, or confined animal feeding operations in Duck.
There is no industrially zoned property in Duck.

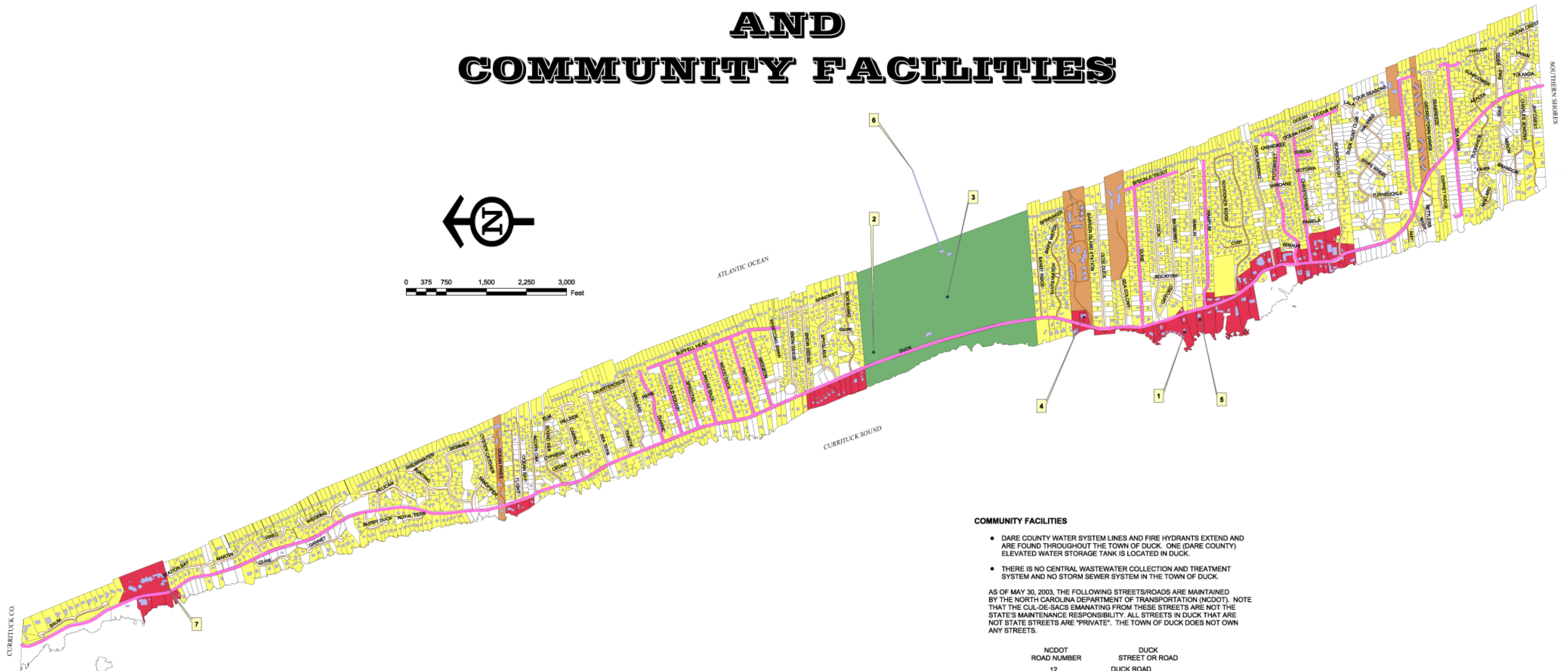
EXHIBIT V-B

DUCK, NORTH CAROLINA

EXISTING LAND USE

AND

COMMUNITY FACILITIES



COMMUNITY FACILITIES

- DARE COUNTY WATER SYSTEM LINES AND FIRE HYDRANTS EXTEND AND ARE FOUND THROUGHOUT THE TOWN OF DUCK. ONE (DARE COUNTY) ELEVATED WATER STORAGE TANK IS LOCATED IN DUCK.
- THERE IS NO CENTRAL WASTEWATER COLLECTION AND TREATMENT SYSTEM AND NO STORM SEWER SYSTEM IN THE TOWN OF DUCK.

AS OF MAY 30, 2003, THE FOLLOWING STREETS/ROADS ARE MAINTAINED BY THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT). NOTE THAT THE CUL-DE-SACS EMANATING FROM THESE STREETS ARE NOT THE STATE'S MAINTENANCE RESPONSIBILITY. ALL STREETS IN DUCK THAT ARE NOT STATE STREETS ARE "PRIVATE". THE TOWN OF DUCK DOES NOT OWN ANY STREETS.

NCDOT ROAD NUMBER	DUCK STREET OR ROAD
12	DUCK ROAD
1297	POTESKEET DRIVE
1408	DIANNE STREET
1409	CHRISTOPHER DRIVE/OCEANWAY COURT
1410	TERESA COURT
1417	PLOVER DRIVE
1425	WAMPUM DRIVE
1469	SEA HAWK DRIVE WEST
1473	BUFFELL HEAD ROAD
1474	OLD SQUAW DRIVE
1475	SPRIGTAIL DRIVE
1476	CANVAS BACK DRIVE
1477	WOOD DUCK DRIVE
1478	PINTAIL DRIVE
1479	WIDGEON DRIVE
1484	SEA HAWK DRIVE WEST
1518	DUNE ROAD
1519	SPECKLED TROUT DRIVE

STATE ROADS

- THE DUCK TRAIL RUNS PARALLEL/ADJACENT TO/ADJOINING NC 12 THROUGHOUT THE TOWN OF DUCK.

- 1 DUCK TOWN OFFICES
- 2 DUCK VOLUNTEER FIRE DEPARTMENT AND POLICE DEPARTMENT
- 3 U. S. ARMY CORPS OF ENGINEERS FIELD RESEARCH FACILITY
- 4 U. S. (DUCK, N.C.) POST OFFICE
- 5 DARE COUNTY WATER TANK
- 6 U. S. ARMY CORPS OF ENGINEERS RESEARCH PIER
- 7 CAFFEY'S INLET LIFESAVING STATION (NATIONAL HISTORIC REGISTER)

REVISED 8-31-2004

V-2

The preparation of this map exhibit was financed in part through a grant provided by the North Carolina Coastal Management Program, through funds provided by the Coastal Zone Management Act of 1972, as amended, which is administered by the Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration.

The Caffey's Inlet Lifesaving Station is the only property in Duck listed on the National Register of Historic Places (NRHP). There are no historic, cultural, and scenic areas that are designated by a local, State, or Federal agency within Duck.

2. Land Area Allocated to Each Land Use

Exhibit V-C includes the number of parcels, the number of acres, and the percentage of the Town's total acres allocated to each of the land use categories. This also shows an estimate of the total acres per person in each category based on the Town's 2000 permanent population of 448 persons.

EXHIBIT V-C DUCK, NORTH CAROLINA EXISTING LAND USE TABULATIONS

Land Use Category	# of Parcels	# of Acres	% of Total	Persons per Acre
Single Family Residential	1,989	766.69	50.80	1.71
Multi-Family Residential	70	56.59	3.75	.126
Commercial	75	88.41	5.86	.197
Institutional	1	158.58	10.51	.354
Undeveloped	550	241.76	16.02	.539
Rights of way and Easements	--	197.53	13.06	.441
TOTALS	2,687	1,509.56	100.00	3.37

3. Land Use Conflicts and Land Use Water Quality Conflicts

Existing land use conflicts and existing land uses that have negative impacts on water quality are deemed minimal in Duck. In Duck, there are no hazardous operations in close proximity to developed areas, there are no blighted areas, and there are no public accesses in Town--thus existing residential development does not impact on this type of public use. While there is development in flood hazard areas--the norm in coastal regions--structures are required to be elevated and are generally constructed so as to better withstand the effects of storm events. The vast majority of land in Duck has been platted and is zoned for residential development. The Town relies on the Dare County Health Department to ensure proper placement and construction of septic tank drain field systems. Inadequate lot sizes are generally not an issue. Of the 386 platted lots remaining for development, only 37 are reported to be less than 10,000 square feet. In 1982, the minimum lot size was increased to 15,000 square feet by Dare County.

B. Development Trends and Projected Development Areas

Current development trends in Duck are expected to continue during the next five years. Some redevelopment of properties is anticipated. Remaining platted and developable lots are dispersed throughout the Town so there is not one area that will likely see a majority of development activity.

C. Projections of Future Land Needs

Duck's population is projected to grow to about 500 people by 2005. By 2010, the Town's population is projected to be about 550 persons. By 2020, the Town will have about 644 persons. The seasonal population is projected to grow as well throughout the planning period. The peak seasonal population in Duck is estimated to be over 14,500 persons.

As of January 2003, there were 386 residential building lots (platted and recorded) remaining in Duck for residential development. In addition, there are isolated 2 – 3 acre tracts that are zoned to allow residential development. Based on Census 2000 figures, 89.60% of housing units in Duck were vacant (seasonal use) while only 10.40% were occupied. Anticipated conversions of seasonal housing to permanent occupancy and the development of remaining platted and zoned lots and tracts will more than accommodate the populations projected in Duck for the ensuing 5, 10, and 20 year periods. The amount of commercially zoned land in Duck is also deemed adequate to meet the projected populations for the planning period.

Chapter VI: Town Facilities

The analysis of community facilities provides the Town with basic information about major types of community facilities including water, roads, and storm water. These facilities have been termed growth shapers for the role that they play in local land development. Infrastructure, whether built by the Town or private entities, can have a major influence on local growth and development – location, costs, density, timing, and the amount of new development. In addition, the Town's policies for the operation, maintenance, extension, and development of facilities can have a major impact on the Town's environmental values.

The Coastal Resources Commission's (CRC) land use management topics recognize the importance of infrastructure in the location and timing of land development. The management goal of the infrastructure carrying capacity management topic is to ensure that public infrastructure systems are appropriately sized, located, and managed so that the quality and productivity of areas of environmental concern (AEC) and other fragile areas are restored and protected.

The infrastructure carrying capacity management topic requires the plan to identify or establish service area boundaries for existing and planned infrastructure. This requirement focuses on water, sewer, and roads. In addition, the future land use map categories developed as a part of this land use plan must be correlated with existing and planned infrastructure.

Utilities and services deemed adequate to meet the current normal needs of the citizens of the Town exist. Water and wastewater are discussed later in this chapter as are the transportation system and design capacities and utilization of other community facilities and services. These include: recreation and beach areas, police protection, emergency medical services, fire fighting, solid waste, schools, libraries, and public health. Community facilities in Duck (Town-owned and otherwise) are shown on EXHIBIT V-B (Existing Land Use and Community Facilities) in the preceding chapter.

A. Water Supply and Wastewater Treatment Systems

Duck receives its potable water from the Dare County Regional Water System. Potable water is available to all areas in Town. As of April 2003, there were 2,090 active residential water accounts and 111 active commercial accounts in Duck. The three primary water sources that feed the Dare County system are:

- Deep wells in Skyco on Roanoke Island;
- Fresh Pond; and,
- Reverse Osmosis Plant.

Quantity issues with respect to the water supply for Duck are not pressing. However, the Town has not yet finalized a formal contract with Dare County for potable water. The Dare County Regional Water System supplies water to Duck. Through water lines in place throughout the Town, water service is, or can be made available to all parts of Duck. The Dare County system has ample capacity to serve the Town's current and projected needs. The system is being upgraded from three (3) million gallons per day to five (5) million gallons per day. The number of wells supplying water to the system is being increased from 10 wells to 14 well. Demands on the system will not exceed 80% of available supply before the year 2020. APPENDIX 1 is a map showing the Dare County Regional Water System serving Duck.

The Duck aquifer is a resource that the Town should carefully and diligently monitor and protect as a potential potable water source. The Town should also work to ensure that any future utilization of the aquifer provide benefit to Town residents and property owners.

According to the Dare County Local Water Supply Plan (02/26/01), the County currently has a well head protection plan. One Dare County Water System monitoring well is located in Duck.

Homes and businesses in Duck rely primarily on septic tank and drain field systems to treat and dispose of wastewater. While under good conditions, such systems are perfectly adequate, Duck's natural environment presents enough hazards to the proper functioning of septic systems that their use must be carefully monitored. Most of the soils in the Town are not well-suited for septic tanks and drain fields. Periodic high water tables in certain areas can block the proper percolation of wastewater throughout the soil and can lead to the contamination of estuarine waters. In addition, placing septic systems too close to wells creates a threat to human health. The Dare County Health Department is responsible for overseeing and permitting the use of septic systems in Duck. The Health Department uses standards adopted by the State of North Carolina's Department of Environment and Natural Resources, Division of Environmental Health. These standards cover the design and location of septic tanks and drain fields. The standards are deemed adequate to meet Duck's needs and potential concerns should problems arise.

Package treatment plants are another option for developments in North Carolina's coastal communities. Such plants are usually constructed and maintained by developers to service residential subdivisions and condominium projects. Unless a package treatment plant is properly maintained and continuously monitored, it can break down, inconvenience the property owners who depend on it, and threaten public health. An improperly managed plant can also become a financial liability to the Town if the developer or homeowners abdicate responsibility for operating it. The Town will avoid these problems by not allowing such plants or obtaining financial and legally binding assurances from developers and homeowners associations that package treatment plants will be properly managed and maintained.

No public sewer exists in Duck and no such system is planned.

B. Transportation Systems

The vast majority of roads and streets in Duck are privately owned. These are maintained by homeowners or neighborhood associations. There are no Town maintained roads at the present time. The North Carolina Department of Transportation (NCDOT) maintains seventeen roads and streets in Duck including NC 12, Duck's main thoroughfare. These are highlighted on EXHIBIT V-B (Existing Land Use and Community Facilities) in the previous chapter.

North Carolina Department of Transportation (NCDOT) representatives with the Edenton Residency Office indicated that there have been no determinations of roadway segments that have an unacceptable level of service.

NCDOT is available to assist the Town--as it does throughout the State--to develop long range plans for system improvements or implement more immediate corrective actions as needed. There is one project included in the NCDOT seven year Transportation Improvement Plan (TIP) that will positively impact the existing motor vehicle transportation system in Duck, although the project is not within the Town. The project (# R-2576) is known as the mid-Currituck County bridge. The bridge is part of the Currituck Sound Area Transportation Study. The Study is also looking at NC 12 from its intersection with U.S. 158 through Duck to Corolla. Duck remains committed to keeping NC 12 two-lanes in its present alignment and configuration but supports the construction of the mid-Currituck County Bridge. Growth levels and development will not increase or decrease as a result of the bridge project, but overall conditions will improve with respect to safety, traffic movement, and emergency evacuation. Growth patterns along NC 12 are already well established and development of vacant properties must comply with Town regulations, primarily zoning.

The State primary and secondary road systems in Duck consist of 11.1 total miles. About 6.5 miles of NC 12 serve Duck. Secondary roads lengths total about 4.6 miles. The Duck Trail, a multi-use path runs along and adjacent to NC 12 throughout the Town. There are no public transportation systems serving Duck.

Given the unpredictability of storm events and the increasing volume of tourist traffic, transportation system demands in Duck--particularly NC 12-- anticipated for the planning period may become more problematic and may not be adequately met by the existing system. According to Dare County, the average daily traffic count along NC 12 in 2000 was 18,000 vehicles, counted at a location in Southern Shores. The construction of a bridge to connect the beaches of neighboring Currituck County with the mainland would greatly ease congestion along NC 12 through Duck.

Although development patterns along NC 12 are well established, the Town remains cognizant of the facility's importance as the main evacuation route for Duck and other

communities. During the planning process, several concepts were generally discussed relative to the transportation system. NC 12 figured prominently in these discussions, as did the need for a mid-Currituck County bridge. The need to keep the present alignment, width, and configuration of NC 12 and the need for the mid-county bridge were developed into objective statements (Chapter IX Plan for the Future) including:

- Lobby for the construction of a mid-Currituck County bridge;
- Lobby for maintaining NC 12 as a two-lane facility in its present configuration through Duck; and,
Encourage the North Carolina Department of Transportation to provide appropriate and timely levels of service with respect to storm water drainage issues in Duck.

C. Storm Water Systems

The Town relies on structures, swales and ditches (associated with the transportation system), ponds, and natural areas to handle storm water run-off. The Town, at the time of this writing, is investigating its options with respect to a comprehensive storm water management study and plan to alleviate or mitigate its storm water problems. The Town will seek assistance to minimize public and private losses due to flood conditions in specific areas. This would be accomplished by provisions designed to:

- Restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- Control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters;
- Control filling, grading, dredging and other development which may increase erosion of flood damage; and,
- Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

Pollutants that enter waters fall into two general categories: point sources and non-point sources. Point sources are typically piped discharges and are controlled through regulatory programs administered by the State. All regulated point source discharges in North Carolina must apply for and obtain a National Pollutant Discharge Elimination System (NPDES) permit from the State. (Non-point sources are from a broad range of land use activities and are typically carried to waters by rainfall, runoff, or snowmelt.) No issues have been raised or cited by permitting agencies with regard to water quality

related to these point source dischargers of waste water. The Town will seek funding and technical assistance to develop a storm water management plan. There are several notable drainage problem areas in Town, primarily along NC 12, although recent storms (2004) have resulted in flooding and standing water along some private streets and State roads in Duck. Along NC 12, problem drainage areas are found at or near Tuckahoe, Charles Jenkins Lane, the Waterfront Shops, and Sound Sea Village.

The Environmental Protection Agency's (EPA) Storm Water Phase II Final Rule covers two classes of storm water dischargers: operators of small municipal separate storm sewer systems (called MS4s) in urbanized areas as defined by the Bureau of the Census and operators of small construction activities that disturb equal to or greater than one (1) and less than five (5) acres of land. Duck does not operate a municipal separate storm sewer system, nor is the Town conducting construction projects.

D. Other Facilities

The solid waste disposal needs of Duck will be met, at least for the next decade, through the use of contracted service. Waste collected is eventually disposed of in a regional solid waste facility in Bertie County.

The primary and secondary educational needs of Duck residents are being met by Dare County Schools. The operating building capacities for the Dare County schools that primarily serve Duck are:

• First Flight Elementary School.	410
• First Flight Middle School.	527
• Kitty Hawk Elementary School.	509
• Manteo High School.	593

At the time of this writing, Dare County is constructing a new high school in Kill Devil Hills near the campuses of First Flight Elementary School and the First Flight Middle School which will serve Duck residents. The school's opening capacity in 2004 will be 800 students.

Library services for Duck residents are provided by Dare County. Library services to the entire area were greatly enhanced with the opening of a branch of the Dare County Library in Kill Devil Hills in 1990.

Medical services to the Town and area are provided by the regional medical center located in Kitty Hawk and a regional hospital in Nags Head. The regional medical center in Kitty Hawk is a satellite facility of the Albemarle Hospital in Elizabeth City.

Basic public health services are available to all Town residents at the Dare County Health Department in Manteo. Emergency medical cases in Duck and elsewhere in

Dare County can be evacuated by ambulance or helicopter. Generally, helicopter evacuees are transported to the Albemarle Hospital in Elizabeth City or Chesapeake General Hospital in Chesapeake, Virginia.

Insect control in the Town falls within the jurisdiction of Dare County.

The law enforcement, emergency medical service, and firefighting capabilities of and for the Town are deemed adequate to meet current and projected needs.

Established in 2003, a professional police force provides police protection to the Town. Currently, the force is comprised of a Chief, 4 officers and a fleet of 5 vehicles.

Dare County provide emergency medical services to Duck through a paid force of Emergency Medical Technicians (EMT). These include paramedics, advances/intermediate emergency medical technicians, and basic emergency medical technicians. Ambulances and an emergency medical services helicopter are available to serve Dare County. The nearest station to Duck is in Southern Shores.

Firefighting services are provided to the Town by the 38 member Duck Volunteer Fire Department, Incorporated. The Department has 2 engines (pumpers), 1 ladder truck, 1 utility truck, 1 brush truck, and miscellaneous equipment at its disposal to use during emergency incidents. In addition to fire fighting, the Department provides assistance at automobile accidents, emergency medical calls, and other emergency situations.

The Beach Central Communications System (9-1-1 emergency reporting telephone system) dispatches fire, emergency medical services, and police services. The system, funded by Dare County, operates from headquarters in the Dare County Detention Center in Manteo.

The Town continues to review its needs with respect to recreation and recreational facilities. In Duck, the major tourist attractions are the Atlantic Ocean and the waters of the Currituck Sound. Typical water related recreational activities occur in and along the ocean and sound including boating, fishing, crabbing, sailing, and sunbathing.

There are no public beach access points along Duck's five plus mile oceanfront although several neighborhood and homeowner associations own and maintain private use access points. The lack of public parking areas is a major obstacle to providing public accesses as is the lack of and cost of available land. The Town contracts with a private firm to provide lifeguard services during summer months.

Future community facilities and utilities needs anticipated as the result of projected growth will be adequately met during the planning period by the Dare County Water system and other utility and service providers. Systems are sized and capable of meeting the needs of the seasonal peaks in population. Off-peak seasonal demands are normally, easily met by existing systems.

Chapter VII: Land Suitability Analysis

The land suitability analysis (LSA) required by State planning guidelines is a process for determining the supply of land in Duck that is suitable for development. The overall purpose of this analysis is to provide the Town with information on the best areas for development in order to guide the formulation of local policies and the design of the future land use map. As part of the suitability analysis, the Town must produce a land suitability analysis map. This map is intended to show the relative degree to which land in Duck is suitable for development. The general process for the suitability analysis and the productions of the suitability map includes:

1. Identifying the factors that should be considered.
2. Determining the relative importance of these factors.
3. Determining the suitability of each factor—the relative development suitability of land with a particular factor.
4. Preparing appropriate maps and overlays of each factor.
5. Combining the overlays to produce a land suitability map.

The sections that follow discuss the process of developing the LSA, characteristics (attributes) of suitable land, the method used to rate suitability factors, and results of the Duck LSA developed by the Town for use in this land use plan.

As discussed below, the State supplied a land suitability program and map for localities to review and use if desired. The State's used a geographic information system (GIS) based program. The State analyzed land suitability for the counties that are required to develop or update land use plans as per CAMA guidelines. The program rates the suitability of acre size parcels of land based on a variety of land suitability factors or attributes. The program weights the attributes to score them, combines the weighted scores for a numerical total score, and assigns the parcel a rating of **least suitable, low suitability, medium suitability, or high suitability**. The State's program classifies the lands in Duck as having **medium suitability** for urban type development. The Town chose to use the State's methodology, program, and results as a reference tool as it developed its land suitability analysis map. The extent of environmental conditions (and related factors such as regulations concerning development in fragile areas) and the relatively poor soil conditions in Duck greatly impact most of the Town with respect to the land's suitability for intensive, urban type development.

A. Land Suitability Analysis Process

The State supplied geographic information system (GIS) based LSA program was reviewed and used as a reference tool for the Town as it developed its own LSA. (The State supplied land suitability analysis map is on file in the Duck Planning Director's Office.) The State supplied program presents a general, macro view of Dare County's lands with respect to land suitability. Isolating Duck from the general macro view of Dare County as presented by the State supplied program results in a view of land

suitability in the Town that is not as useful or representative as it might be. Thus, the Town undertook its own analysis using mapping that is more detailed.

To construct its analysis, the Town consulted mapping and data supplied by the State, the composite environmental conditions map and the existing land use analysis and map prepared as a part of this land use plan, the Town's current zoning map, flood plain mapping, and a variety of maps supplied by the State concerning environmental conditions in and around Duck.

B. Characteristics of Land Suitable for Development

To determine development suitability, State guidelines identify several general sets of suitability characteristics that must be considered. These factors relate primarily to the Town's physical appearance and environment:

- Environmental characteristics, natural features, and water quality conditions
- Existing development and man-made features
- Proximity to existing development
- Compatibility with existing land uses
- Potential impact of development on historically, culturally significant, or scenic sites
- Availability and capacity of community facilities
- Regulatory restrictions on land development – Town, State, and Federal

C. Development Suitability Factors

Defining the characteristics that make land suitable for development is the starting point for the land suitability analysis. State guidelines require the identification of specific types of suitability factors that will be considered in the analysis.

To define these specific factors, it is helpful to look at Duck through the eyes of a land developer. What are the best natural features for development? What natural amenities are desirable? What types of public facilities are needed? How far can facilities be extended to serve development? What types of existing land uses should be avoided? What types of development should be located nearby?

In Duck, specific development suitability factors include:

- Access to paved roads
- Access to public water
- Upland topography (lack of wetlands)
- Septic tank use suitability
- Allowable current zoning
- Proximity to compatible development

- Landscape interests and scenic areas and views
- Environmental concerns and regulations
- Proximity to protected/conservation lands
- Use permitted by State and Federal regulations
- Proximity to developed land
- Proximity to flood hazard area

These factors are related to a single class of development that lumps together all of the land use activities generally considered to be urban development: higher density residential development, intensive commercial (and industrial) uses, and the availability of basic services. The land suitability analysis is based on the suitability of land for urban type development. However, one must recognize that less dense or less intense development or land uses can generally be accommodated in many areas of Town, even if such areas are deemed to be “less suitable” for urban type development by the LSA. For example, less intensive commercial activities such as specialty shops and water based commercial activities can generally be accommodated in these areas.

D. Relative Importance of Land Suitability Factors and Land Suitability Rating

EXHIBIT VII-A (page VII-5) displays the suitability factors identified above and assigns a relative importance using a qualitative scale. It is a common practice to use a qualitative scale that can be converted to a numerical scale to assign weights to the factors. The chart below illustrates how a weighting scale can be developed.

<u>Relative Importance</u>	<u>Numerical Weight</u>
Important	1
Very Important	2
Extremely Important	3

Using this scale, one may decide that the presence of a flood hazard is an important factor and that access to roads is an extremely important factor. In the weighting process, access to roads is 3 times as important as the presence of a flood hazard in determining the development suitability of a particular location. The assignment of factors’ relative importance, though subjective, were formulated based examination of the mapping and data prepared (and noted above) for this land use plan, field surveys, and the collective knowledge and input of Town leaders.

Ratings for suitability factors are a way to approximate the development suitability of land that has a particular type of factor or characteristic. Ratings are typically the result of professional judgments and are expressed generally as either a number or a qualitative description – high, medium, or low. Take special flood hazard area for example. For this particular factor, land inside a flood hazard area may be shown as having low suitability; land outside a flood hazard area may be shown as having high suitability. The classes shown on the composite environmental conditions map (Chapter

IV, EXHIBIT IV-C, page IV-7) prepared in the natural systems analysis readily lend themselves to suitability ratings.

Again, the factors' ratings are subjective. They served as a guide when examining the relative suitability of lands in Town for urban type development and were formulated based on field surveys, mapping and data prepared for this land use plan, and the collective knowledge and input of Town leaders. See EXHIBIT VII-B.

E. Land Suitability Analysis Map

Duck is a town with several distinct geographic areas and identifiable sub-regions. This has occurred given the extent and complexity of environmental factors affecting the Town, its natural geographic boundaries, its existing development patterns, constraints to development (regulatory and otherwise), and the amount of Federally-owned within the Town. Generally, the areas or sub-regions are areas along the Atlantic Ocean shoreline, areas east of NC 12, areas west of NC 12 extending to the Currituck Sound, isolated upland areas, Currituck Sound shoreline, flood hazard areas, storm surge areas, wetlands, and areas under Federal control. These areas were evaluated for development suitability based on the attributes discussed above using a qualitative scale.

The output of LSA is a land suitability map that classifies land areas in one of the following 4 classifications: least suitable; low suitability; medium suitability; and, high suitability. EXHIBIT VII-C is the land suitability analysis map for Duck.

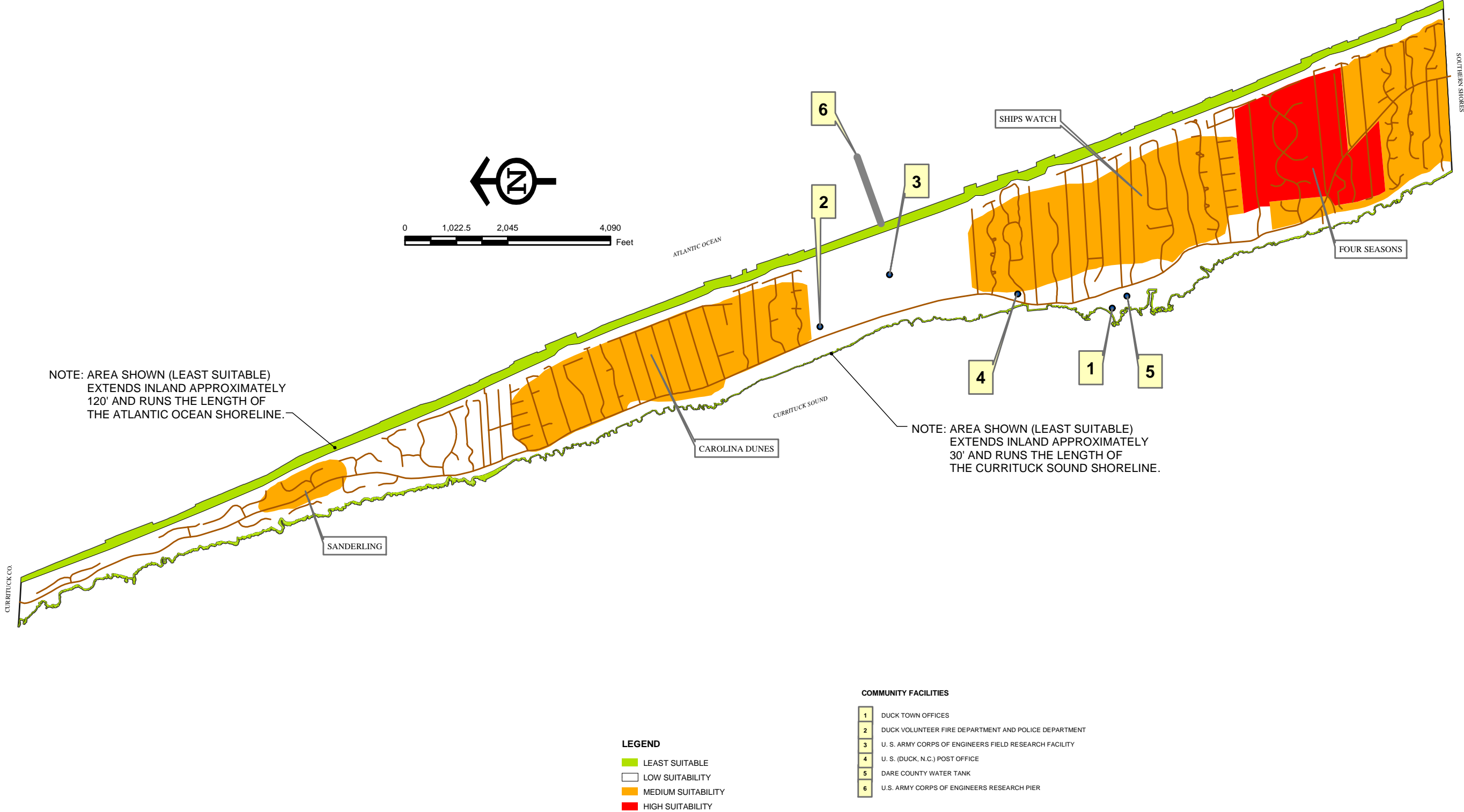
**EXHIBIT VII-A
DUCK, NORTH CAROLINA
RELATIVE IMPORTANCE OF LAND SUITABILITY FACTORS**

SUITABILITY FACTOR	IMPORTANT 1	VERY IMPORTANT 2	EXTREMELY IMPORTANT 3
Access to paved roads		X	
Access to public water			X
Upland topography (lack of wetlands)		X	
Septic tank use suitability			X
Allowable current zoning	X		
Proximity to compatible Development		X	
Landscape interests and scenic areas and views	X		
Environmental concerns and Regulations			X
Proximity to protected/conservation lands			X
Quality water nearby		X	
Use permitted by State and Federal regulations			X
Proximity to developed land		X	
Within flood hazard area		X	

**EXHIBIT VII-B
DUCK, NORTH CAROLINA
RELATIVE DEVELOPMENT SUITABILITY RATINGS**

SUITABILITY FACTOR	LOW (1)	MEDIUM (2)	HIGH (3)
Access to paved roads	> 1 mi. (1)	0.5-1.0 mi. (2)	<0.5 mi. (3)
Access to public water	> 5 mi. (1)	0.25-0.5 mi. (2)	<0.25 mi. (3)
Upland topography (lack of wetlands)	No (1)	~	Yes (3)
Septic tank use Suitability	Poor (1)	Fair (2)	Good (3)
Allowable current zoning	No (1)	~	Yes (3)
Proximity to compatible Development	> 1 mi.	0.5-1.0 mi.	<0.5 mi. (3)
Landscape interests and Scenic areas and views	Yes (1)	~	No (3)
Environmental concerns and regulations	Yes (1)	~	No (3)
Proximity to protected/ conservation lands	Within (1)	0.5-1.0 mi. (2)	> 1.0 mi. (3)
Quality water nearby	>0.5 mi. (1)	0.5-1.0 mi. (2)	> 1.0 mi. (3)
Use permitted by State and Federal regulations	No (1)	~	Yes (3)
Proximity to developed land	> 1 mi. (1)	0.5-1.0 mi. (2)	<0.5 mi. (3)
Within flood hazard area	Within (1)	~	Outside (3)

EXHIBIT VII-C
DUCK, NORTH CAROLINA
LAND SUITABILITY ANALYSIS MAP



Chapter VIII: Review of Current CAMA Land Use Plan Affecting Duck

In November 2001, the voters of Duck voted to incorporate. The Town is preparing its first CAMA land use plan, having been included previously in the plan(s) of Dare County.

The current plan of record for Dare County was adopted by the County and certified by the Coastal Resources Commission (CRC) in 1994. The County is preparing to submit its 2002-2003 update of the 1994 land use plan to the CRC for certification. The 2002-2003 Dare County land use plan update was started and developed under land use planning guidelines that have since been revised. In August 2002, revised land use plan guidelines were adopted for use. (The land use plan being developed by Duck is under the “new” guidelines.) The Dare County Board of Commissioners adopted the 2002-2003 land use plan update on May 5, 2003. The document will be submitted for CRC review (and approval) in July 2003.

Previous CAMA guidelines and the current CAMA land use planning guidelines require localities to review their current land use plans during the process of updating same. Current guidelines generally require a more in depth review and evaluation of land use plans to evaluate the locality’s success in implementing the land use plan and the effectiveness of its policies on achieving the goals of the plan. Localities are required to consider three factors in the review:

1. The consistency of the locality’s current land use plan and development ordinances with the land use plan policies.
2. Adoption of the plan’s implementation measures by the local governing body.
3. Efficacy of current policies.

Under previous guidelines, a more general review was normally conducted. As a part of the 2002-2003 Dare County land use plan update, the County evaluated its current (1994) land use plan. EXHIBIT VIII – A is taken from the 2002-2003 Dare County land use plan update evaluating the 1994 plan. Appendix A of the 2002-2003 Dare county land use plan update, available through the Dare Country Planning Department, analyzes the policies and the implementation strategies of the County’s 1994 plan.

**EXHIBIT VIII-A
DUCK, NORTH CAROLINA
EXCERPT FROM 2002-2003 DARE COUNTY CAMA LAND USE PLAN UPDATE -
EVALUATION OF EXISTING LAND USE PLAN**

e) Evaluation of Existing Land Use Plan

Since 1994, the policies of the Dare County Land Use Plan have played an important role in several land use issues that have dominated public policy debates in unincorporated Dare County.

The underlying theme of the 1994 LUP, as expressed in a resolution included with the Plan, was to maintain the coastal village atmosphere of unincorporated Dare County. Most illustrative of the effort to prevent the loss of a sense of place has been the conflict between market forces seeking to deliver national retail franchise businesses to Dare County's evolving population base and the desire of citizens and local merchants to preclude the introduction of these uncharacteristic retailers and their large floor area structures. The result of this debate was the adoption of an ordinance to limit floor area ratio in the Village Commercial zoning district in Duck. In addition, as of 2001 the Dare County Board of Commissioners had established a moratorium on all large commercial structures greater than 20,000 square feet. The purpose of the moratorium was to provide staff time to develop ordinances and standards to help insure that buildings in unincorporated Dare County did not overpower the landscape or represent future eyesores once abandoned or vacated. In March 2002, the Board adopted a gross floor limitation of 20,000 square feet for retail structures in all commercial and industrial zoning districts.

Perhaps, more controversial than the conflict with big box retailers was an effort by the Dare County Board of Commissioners to use its land use plan to prevent the relocation of the Cape Hatteras Lighthouse. Attempts by the Board of Commissioners to include language in the LUP stating the County's preference that a shoreline stabilization technique be used instead of relocation met resistance from the NC Coastal Resources Commission. The matter was eventually resolved and the Lighthouse was relocated.

The LUP's policy on wastewater treatment played a decisive role in a decision to preclude the construction and operation of a central wastewater treatment plant in conjunction with the development of a 65-acre parcel in Duck. Developers had proposed to use such a facility and the Planning Board and staff determined doing so would be contrary to County policy. The subdivision was eventually approved but the proposed central wastewater treatment system was eliminated.

SOURCE: Dare County 2002-2003 CAMA Land Use Plan Update, section 1, pages 28 and 29, Dare County Planning Department, May 28, 2003.

EXHIBIT VIII – A (continued)
DUCK, NORTH CAROLINA
EXCERPT FROM 2002-2003 DARE COUNTY CAMA LAND USE PLAN UPDATE –
EVALUATION OF EXISTING LAND USE PLAN

Although the developer argued that the controlled treatment of wastewater was preferable, the County maintained its position that privately owned wastewater treatment plants have a poor maintenance track record and are often only used to bolster lot coverage of development density.

The 1994 Plan also recognized competition for the use of public trust waters that are so important to the tourist economy of Dare County. As the use of personal watercraft, privately owned and rented, continued to create controversy, the County Commissioners sought legislative authorization from the NC General Assembly to regulate activities in the County's public trust waters. A bill providing Dare County regulatory powers over the public trust waters was ratified in May 2001. It is anticipated that a plan for zoning the waters will be developed in the period between 2003 and 2004.

As has been the case since the early 1980's, the County continues its efforts to extend detailed zoning maps throughout the unincorporated areas. Given the unpredictable nature of the political climate, this long-term goal will continue to be a challenge in the coming years.

SOURCE: Dare County 2002-2003 CAMA Land Use Plan Update, section 1, pages 28 and 29, Dare County Planning Department, May 28, 2003.

Chapter IX: Plan for the Future

A. Introduction

The “Plan for the Future” sets Duck’s course of action to achieve its vision. This element has three components: land use and development goals, policies, and a future land use map. As a whole, the plan sets out the strategies, actions, and programs the Town will implement to achieve its goals, and it provides a roadmap for future land use and development in the Town.

The policies and the future land use map address the Coastal Resources Commission’s (CRC) six management topics. These management topics are intended to ensure that local land use plans support the overall goals of CAMA and provide a “substantive basis” for CRC review and certification of local plans. The plan’s goals, the types of policies and their content, and the spatial policies of the future land use map address the CRC management topics for land use plans.

In addition, this chapter analyzes and evaluates the Town’s policies to demonstrate that they support the management topics. The management topics require two levels of policy analysis. At a more general or summary level, this plan demonstrates that its policy framework goals, policies, and future land use map – will “guide land use and development in a manner that is consistent with the ... management topics.” A second, more detailed analysis is intended to determine the impact of the plan’s policies – including the future land use map – on the management topics.

B. Management Topics and Local Areas of Concern

Management topics are categories of local land use and development policies determined by the CRC to be essential for achieving the local land use planning mission. The purpose of the management topics is to support the important tie between the goals of CAMA and local land use plans by clearly describing CRC planning goals and expectations for local land use plans and providing benchmarks for the development of local policies.

EXHIBIT IX-A summarizes the management topic categories. The first five of the topics on the list address planning concerns associated with the goals of CAMA.

EXHIBIT IX-A
DUCK, NORTH CAROLINA
SUMMARY OF LAND USE PLAN MANAGEMENT TOPICS

Public Access – strategies for maximizing community access to beaches and public trust areas.

Land Use Compatibility – management of land use and development in a way that minimizes its primary and secondary impacts on natural and man-made resources.

Infrastructure Carrying Capacity – strategies to ensure that infrastructure is available to support anticipated and planned development and that it is managed to protect areas of environmental concern and other fragile areas.

Natural Hazard Areas – policies to reduce the community's vulnerability to natural hazards.

Water Quality – land use and development policies and strategies to protect quality waters and to restore quality in waters that are non-supporting.

Local Areas of Concern – specific policies and strategies to address local planning and development goals.

The sixth management topic, local areas of concern, is intended to incorporate specific issues, concerns, and opportunities that are identified by the Town. For Duck, these issues include:

- Atlantic Ocean Shoreline
- Beach Driving
- Beach Re-nourishment and Maintenance
- Commercial Development
- Community Appearance
- Currituck Sound Shoreline
- Development Design Standards
- Duck Trail
- Federal Properties
- Intergovernmental Relations
- Overhead Utility Lines
- Parking and Loading/Off-loading Areas
- Public Safety
- Redevelopment
- Residential Development
- Septic Tank Use

- Sexually Oriented Businesses
- Solid Waste Management
- Storm Water Management
- Tourism
- Town Commons Area
- Transportation
- Uses of and Activities In and On Ocean and Sound Waters

For each of the management topics and the issues listed above, goals, objectives, and policies were developed. Policies were developed recognizing management goals, planning objectives, and land use plan requirements. The management goals define the desired outcomes or results that the CRC seeks through its overall management of coastal resources. A second part is a planning objective, which defines the more immediate role that local land use plans play in achieving the management goal. And finally, planning requirements are specific minimum content requirements for policies that are included in land use plans to address the management topics.

C. Goals, Objectives, and Policies

1. Introduction

Goals are the desired ends toward which the policies and programs of the land use plan are directed. Goals are often considered to be the values and general principles that guide the development of a community. They put in words a community's preferred future. Goals also provide a benchmark for developing effective policies and programs to achieve the desired future. The desired ends in the goal statements are fairly general, but they are consistent with the desires expressed in the Town's vision. Goals are not time-bound.

There is no mandatory process for setting goals and no required format or content for goal statements. The guidelines require consideration of two initial plan elements in developing goals: the community concerns and aspirations, and the needs and opportunities identified in the analysis of existing and emerging conditions (Chapter II). Given its status as a "new" town, Duck opted to list and include goal statements for a number of local areas of concern to address its specific needs and circumstances. The State designated management topics' goals and planning objectives are listed and included as well. Some of these have been modified to more accurately address local needs and concerns.

Objectives help identify the steps that will be taken to achieve Duck's goals and strengthen the link between its goals and policies. Objectives also assist in the completion the required analysis of policies to demonstrate that they address the management topics. And finally, objectives make it easier for Duck to measure its progress toward attaining its goals and to assess the effectiveness of its plan.

For the purposes of the CAMA land use plan, policies are a consistent set of principles and decision guidelines or courses of action, adopted by an elected board, that are intended to attain the locality's land use and development goals and objectives.

The State requirements allow flexibility in developing policies. However, the planning guidelines have three major requirements that affect policy content. These requirements are:

1. Policies must be consistent with the goals of the Coastal Area Management Act and other applicable state and federal rules;
2. Policies must effectively guide development and use of land in a manner that is consistent with goals, planning objectives, and land use plan requirements of each management topic; and
3. If a policy has a negative impact on any management topic, the plan must include additional policies, methods, programs, and/or processes to mitigate the negative impact.

Generally, the guidelines require two types of policies in the land use plan. The first type, basic policies, deals with the central issues of land use planning. The second type, land use and development policies, and the associated future land use map, are closely tied to basic policies, but are more detailed. And they relate primarily to the land classifications or generalized land use designations, the land use principles and guidelines included in the classification or designation, and their spatial distribution on the future land use map.

The policies will guide both day-to-day and long-range decisions and actions of the local government. They may assist with a zoning decision or they may guide long-range planning. They may also provide the foundation for the specific actions that the local government will take to implement the plan. As a result of the range of purposes that they serve, there may be significant range in the content and specificity of the policies. Policies are regulatory and are used by the Division of Coastal Management in making consistency determinations for issuance of CAMA permits. Local policies are also used in Federal consistency determinations.

2. Issue Areas' Goals, Objectives, and Policies

Several action oriented terms are used in this land use plan and as a part of many of the policy statements in this chapter. The terms are defined as follows:

Should – An officially adopted course or method of action intended to be followed to implement goals. Though not as mandatory as “shall”, it is still an obligatory course of action unless clear reasons can be identified that an exception is warranted. Elected, appointed, and administrative officials may be involved at all levels from planning to implementation.

Create – Bring about the desired goal, usually with elected and appointed officials and staff involved and actions, which may involve financial support, as appropriate at all levels from planning to implementation.

Continue – Follow past and present procedures and funding, if appropriate, to maintain desired goal, usually with elected and appointed officials and staff involvement and actions at all levels from planning to implementation.

Encourage – Foster the desired goal through Town policies and actions, including financial support, if appropriate.

Enhance – Improve current goal to a desired state through the use of policies and actions at all levels of planning using external resources and Town financial support as appropriate.

Identify – Catalog and confirm issues, resource(s), and potential or desired actions.

Implement – Act to accomplish land use plan objectives.

Maintain – Keep in good condition the desired state of affairs through the use of Town policies and with elected and appointed officials and staff involvement, funding, and actions as appropriate.

Prevent – Stop described event through the use of appropriate Town policies and regulations, as well as coordination with other local, State, and Federal planning and regulatory agencies and programs. Actions may involve Town financial support, if appropriate.

Promote – Advance the desired state through the use of Town policies and elected and appointed officials and staff involvement, and take action as appropriate.

Protect – Guard against a deterioration of the desired state through the use of Town policies, regulations, and funding, as appropriate, in concert with other local, State, and Federal programs and regulations. Enlist the cooperative efforts of elected and appointed officials, staff, and external resources including other local, State and Federal agency personnel.

Provide – Take the lead role in supplying the appropriate support to achieve the desired goal. The Town is typically involved in all aspects from planning to implementation to maintenance. Actions may involve Town financial support, if appropriate.

Strengthen – Improve and reinforce the desired goal through the use of Town policies and regulations in concert with other local, regional, statewide, or Federal programs

and regulations. Elected and appointed officials and staff, as well as external resources may be involved and take action, including financial support, if appropriate.

Support – Adopt and pursue policies and take action to coordinate activities and supply necessary resources, as appropriate, to achieve desired goal.

Sustain – Uphold the desired state through Town policies and regulations, appropriate financial assistance, and elected and appointed official and staff involvement and actions to achieve the desired goal.

Work – Cooperate and act through the use of staff, Town officials, outside resources and volunteers to create the desired goal.

ISSUE AREA #1: ATLANTIC OCEAN SHORELINE

GOAL #1: Preserve, protect, and enhance the Atlantic Ocean Shoreline and ensure future generations are able to enjoy its beauty and bounty and can continue to use the beach and water for active and passive recreation and leisure activities.

POLICY#1a: Duck supports the continued management of oceanfront shoreline development to protect and preserve the natural and recreational resources along the oceanfront.

POLICY #1b: Duck will use its police powers to adopt and enforce ordinances and procedures to regulate land use, development, and redevelopment and supports applicable State and Federal laws and regulations regarding building, land uses, and development in areas of environmental concern. Duck reserves the right to review, comment, advocate, or oppose any proposed regulations or programs that may affect the regulation of ocean shoreline areas of environmental concern.

POLICY #1c: Duck will: provide clear direction to assist decision making and consistency findings for zoning, divisions of land, and public and private projects; encourage efforts and programs to keep beaches clean and free from refuse; and, support programs and initiatives to annually assess shoreline changes (erosion and accretion).

POLICY #1d: Duck will review and analyze development and redevelopment proposals for consistency with the future land use map included in this land use plan.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #1a: Enforce, and amend as necessary, the Town ordinance prohibiting beach fires and open burning.

OBJECTIVE #1b: Maintain/provide ocean rescue services, emergency medical services, and police protection.

OBJECTIVE #1c: Adopt and apply development policies that balance protection of natural resources and fragile areas with residential and economic development.

OBJECTIVE #1d: Develop policies that minimize threats to life, property, and natural resources resulting from development located in or adjacent to hazard areas, such as those subject to erosion, high winds, storm surge, flooding, or sea level rise.

OBJECTIVE #1e: Develop location, density, and intensity criteria for new, existing development and redevelopment including public facilities and infrastructure so that they can better avoid or withstand natural hazards.

OBJECTIVE #1f: Use the Town website and quarterly newsletter to disseminate information to residents and visitors concerning beach use and related issues.

OBJECTIVE #1g: Prohibit commercial activity on the ocean beach.

OBJECTIVE #1h: Develop, adopt, and enforce, and amend as necessary, a shoreline overlay zoning district to address development, redevelopment, and uses along shorelines and in adjacent waters.

ISSUE AREA #2: BEACH DRIVING

GOAL #2: Regulate beach driving.

POLICY #2a: Duck will adopt and enforce ordinances and procedures to regulate beach driving.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #2a: Enforce, and amend as necessary, the Town beach driving ordinance.

OBJECTIVE #2b: Use the Town website and quarterly newsletter to disseminate information to residents and visitors concerning beach driving regulations and related issues.

ISSUE AREA #3: BEACH RE-NOURISHMENT AND MAINTENANCE

GOAL #3: Re-nourish and maintain the ocean beach.

POLICY #3a: Duck supports the concepts of beach re-nourishment and maintenance as shoreline management alternatives along appropriate areas of the ocean beach.

POLICY #3b: Duck will: stay informed and involved relative to Federal, State, and/or regional studies and initiatives concerning beach re-nourishment and maintenance; work with and support efforts by CAMA concerning beach re-nourishment and maintenance; and, support programs and initiatives to annually assess shoreline changes (erosion and accretion).

An objective that will help Duck achieve its goal and implement its policy is:

OBJECTIVE #3a: Provide information and links to technical assistance from the Division of Coastal Management concerning beach re-nourishment and maintenance activities and options such as sand fencing.

ISSUE AREA #4: COMMERCIAL DEVELOPMENT

GOAL #4: Ensure continued development of small, specialty-type shops and the vitality of existing businesses.

POLICY #4a: Duck supports small, specialty-type shops and commercial development in areas zoned for such activities and encourages the continued existence and development of locally owned businesses and encourages commercial building designs, color designs, and construction materials and methods that reflect Duck's coastal village character.

POLICY #4b: Duck will: encourage local support and patronage for Town businesses; and, recognize the importance of business and commerce activities in the Town and seek ways in which the Town can act as a catalyst to keep business owners involved in Town activities and programs.

POLICY #4c: Duck will review and analyze development and redevelopment proposals for consistency with the future land use map included in this land use plan.

POLICY #4d: Duck will continue to regulate building intensity and oversized structures by enforcing, and amending as necessary, the zoning ordinance. The zoning ordinance regulates building intensity factors such as building height, lot coverage, and building setback(s) for commercial and residential building development. The ordinance also specifies maximum and minimum building sizes for commercial buildings.

Objective that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #4a: Enforce, and amend as necessary, the Town zoning ordinance and provisions regulating signs.

OBJECTIVE #4b: Develop commercial building/development design guidelines and standards including signs, landscaping, and building color(s), styles, and materials.

OBJECTIVE #4c: Actively seek input from small business owners concerning Town policies.

OBJECTIVE #4d: Actively seek ways to provide and ensure a safe environment for pedestrians in commercial areas and to minimize pedestrian-vehicular conflicts in commercial areas; and to improve circulation patterns in commercial areas.

OBJECTIVE #4e: Encourage shared use of parking and loading/off loading areas through the development review process.

OBJECTIVE #4f: Study designating crosswalks in the Town's commercial areas.

OBJECTIVE #4g: Seek ways to assist business owners to understand regulations and programs that may affect their activities and establishments.

OBJECTIVE #4h: Encourage timely meetings or programs for business owners to seek their input on Town issues and to disseminate information concerning applicable initiatives, regulations, and programs.

OBJECTIVE #4i: Periodically assess land use type needs, commercial zoning district boundaries, economic development conditions and emerging trends, and the types of permitted uses allowed in zoning districts.

ISSUE AREA #5: COMMUNITY APPEARANCE

GOAL #5: Remain aesthetically pleasing while maintaining coastal village image.

POLICY #5a: Duck will adopt and enforce ordinances and procedures to regulate land use, development, redevelopment, and community appearance and explore incentive programs such as grants, group purchases, and recognition programs to enhance community appearance.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #5a: Enforce, and amend as necessary, the Town zoning ordinance and provisions regulating signs.

OBJECTIVE #5b: Develop commercial building/development design guidelines and standards.

OBJECTIVE #5c: Use the Town website and quarterly newsletter to disseminate information to residents and visitors concerning community appearance (litter, signage, etc.) related issues.

OBJECTIVE #5d: Encourage landscaping and landscaping features maintenance throughout the Town's commercial areas by business owners and in residential neighborhoods through neighborhood community associations.

OBJECTIVE #5e: Study regulations and/or incentives to have existing utility lines placed underground.

OBJECTIVE #5f: Study requiring underground utility placement in new developments and in commercial or group redevelopments.

ISSUE AREA #6: CURRITUCK SOUND SHORELINE

GOAL #6: Preserve, protect, and enhance the Currituck Sound shoreline and ensure future generations are able to enjoy its beauty and bounty and can continue to use it for passive and active recreation and leisure activities.

POLICY #6a: Duck supports continued management of the Currituck Sound shoreline to protect and preserve the natural resources of the water and shoreline relying primarily on the CAMA permit program and the Areas of Environmental Concern (AEC) designated under the CAMA program. Duck reserves the right to review, comment, advocate, or oppose any regulations or programs that may affect the regulation of estuarine waters and/or the estuarine shoreline.

POLICY #6b: Duck will: provide clear direction to assist decision making and consistency findings for zoning, divisions of land, and public and private projects; and, support State and Federal programs and initiatives to reduce and control pollution from water craft.

POLICY #6c: Duck will review and analyze development and redevelopment proposals for consistency with the future land use map included in this land use plan.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #6a: Adopt and apply development policies that balance protection of natural resources and fragile areas with residential and economic development.

OBJECTIVE #6b: Develop regulations and programs that minimize threats to life, property, and natural resources resulting from development located in or adjacent to hazard areas, such as those subject to erosion, high winds, storm surge, flooding, or sea level rise.

OBJECTIVE #6c: Develop location, density, and intensity criteria for new, existing development and redevelopment including public facilities and infrastructure so that they can better avoid or withstand natural hazards.

OBJECTIVE #6d: Use the Town website and quarterly newsletter to disseminate information to residents and visitors concerning sound use and related issues.

OBJECTIVE #6fe Develop, adopt, and enforce, and amend as necessary, appropriate regulations of public and private recreational uses.

OBJECTIVE #6f: Develop, adopt, and enforce, and amend as necessary, a shoreline overlay zoning district to address development, redevelopment, and uses along shorelines and in adjacent waters.

ISSUE AREA #7: DEVELOPMENT DESIGN STANDARDS

GOAL #7: Develop and implement development design standards.

POLICY #7a: Duck supports the concept of development design standards.

POLICY #7b: Duck will review and analyze development and redevelopment proposals for consistency with the future land use map included in this land use plan.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #7a: Enforce, and amend as necessary, the Town zoning ordinance.

OBJECTIVE #7b: Develop commercial building/development design guidelines and standards including signs, landscaping, and building color(s), styles, and materials.

OBJECTIVE #7c: Use the Town website and quarterly newsletter to disseminate information to residents and visitors concerning commercial building/development design standards and related issues.

ISSUE AREA #8: DUCK TRAIL

GOAL #8: Maintain, enhance, and improve Duck Trail.

POLICY #8a: Duck supports the continued maintenance of the Duck Trail and efforts to enhance, improve, and expand the facility to provide a safe setting for recreation and as an alternative transportation route.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #8a: Seek ways to manage and support Duck Trail use.

OBJECTIVE #8b: Investigate additions and/or extensions to Duck Trail including alternative routes. An important aspect of Duck Trail additions and/or extensions

would be locations along the west side of NC 12 and along the Currituck Sound shore line and shore front.

OBJECTIVE #8c: Seek funding to maintain and improve Duck Trail.

OBJECTIVE #8d: Use the Town website and quarterly newsletter to disseminate information to residents and visitors concerning Duck Trail rules and use and related issues.

OBJECTIVE #8e: Seek ways to improve safety along Duck Trail, particularly at cross streets, cross walks, and parking area entrances and exits.

OBJECTIVE #8f: Support the addition or incorporation of appropriate landscaping to better define Duck Trail and improve user safety.

OBJECTIVE #8g: Support the placement of appropriate signage and marking(s) along Duck Trail and the installation of information kiosks to provide maps, safety and contact information, local events calendar(s), and information on the positive health and recreation benefits of biking and walking/jogging.

OBJECTIVE #8h: Support the creation of way stations/rest areas, the installation of bicycle racks, and incorporate fitness stations as appropriate at various points along Duck Trail.

OBJECTIVE #8i: Solicit the cooperation of local bicycle rental establishment to disseminate information concerning safety and rules for using the Duck Trail.

OBJECTIVE #8j: Support efforts to enhance and improve the connectivity of Duck Trail facilities.

ISSUE AREA #9: FEDERAL PROPERTIES

GOAL #9: Ensure use of Federal properties in a manner consistent with Town growth patterns, character, and image.

POLICY #9a: Duck supports the future conversion of underused Federal properties into Town assets.

Objectives will help Duck achieve its goal and implement its policy include:

OBJECTIVE #9a: Take appropriate actions to ensure that the Town has the opportunity to purchase all or part of Federal properties within its borders for use as a commons area or for other public uses.

OBJECTIVE #9b: Take appropriate actions to ensure that future land uses of Federal properties, whether by public or private entities, meet the Town's criteria for conservation and public recreation areas.

ISSUE AREA #10: INFRASTRUCTURE CARRYING CAPACITY AND PROVISION OF PUBLIC FACILITIES AND SERVICES

GOAL #10: Ensure that public systems and services are sized, located, and managed to protect or restore the quality of areas of environmental concern or other fragile areas while providing adequate levels of service to meet the needs of citizens.

POLICY #10a: Duck is committed to the provision of public systems and services at levels adequate to meet the needs of resident and visitors.

POLICY #10b: Duck will: monitor local levels of service issues and take a proactive approach toward ensuring service demands are met; and, ensure continuity of services and cost effectiveness of services.

POLICY #10c: Duck will review and analyze development and redevelopment proposals for consistency with the future land use map included in this land use plan.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #10a: Identify and/or establish service area boundaries for existing and future infrastructure.

OBJECTIVE #10b: Correlate future land use map categories of this (and subsequent updates to) land use plan with existing and planned infrastructure.

OBJECTIVE #10c: Use the Town website and quarterly newsletter to disseminate information to residents and visitors concerning Town services, schedules, and related issues.

OBJECTIVE #10d: Participate in regional discussions of infrastructure and service provision affecting Duck.

OBJECTIVE #10e: Identify alternatives to enhance and improve current services.

OBJECTIVE #10f: Investigate alternative service providers to enhance and improve service provision and to provide economic (fiscal) advantages to the Town

OBJECTIVE #10g: Develop a hazard mitigation plan, including a debris management element.

OBJECTIVE #10h: Develop and implement a storm water management plan.

OBJECTIVE #10i: Study implementation of a business privilege tax.

OBJECTIVE #10j: Develop a capital improvements plan.

OBJECTIVE #10k: Support programs and initiatives to guarantee a safe, uninterrupted supply of potable water for the Town.

OBJECTIVE #10l: Support programs and initiatives to monitor and protect the Duck aquifer as a potential potable water resource and ensure any future utilization of the aquifer benefits Town residents and property owners.

ISSUE AREA #11: INTERGOVERNMENTAL RELATIONS

GOAL #11: Cooperate and interact with other governments.

POLICY #11a: Duck supports improved intergovernmental relations and cooperative, multi-jurisdictional efforts to solve regional and area problems.

POLICY #11b: Duck will seek opportunities to share services to achieve economies of scale by partnering with other localities for mutual interests.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #11a: Interact with local governments in the region and State and Federal agencies on a routine basis to promote its interests.

OBJECTIVE #11b: Make other governmental agencies aware of Duck's positions on local, regional, State, and Federal issues.

OBJECTIVE #11c: Seek cooperative agreements with other local governments to provide or enhance and improve services such as technology infrastructure and public safety.

OBJECTIVE #11d: Enter mutual aid agreements for ocean rescue, emergency medical services, and police services.

OBJECTIVE #11e: Develop relationships with local, State, and Federal elected and appointed officials.

OBJECTIVE #11f: Work with Dare County to ensure that Duck's needs and goals are considered by the Rural Planning Organization.

ISSUE AREA #12: LAND USE COMPATIBILITY

GOAL #12: Ensure that development and use of resources or preservation of land minimizes direct and secondary environmental impacts, avoids risks to public health, safety and welfare and is consistent with the capability of the land based on considerations of interactions of natural and manmade features.

POLICY #12a: Duck will use its police powers to adopt and enforce ordinances and procedures to regulate land use, development, and redevelopment in accordance with the goals and policies of the land use plan and supports applicable State and Federal laws and regulations regarding land uses and development in areas of environmental concern.

POLICY #12b: Duck will review and analyze development and redevelopment proposals for consistency with the future land use map included in this land use plan.

POLICY #12c: Maintain the pattern of current development specifically low density residential (0-4 dwelling units per acre) and small scale commercial development (by right 5,000 square foot maximum or less buildings on minimum 20,000 square foot lots with provisions for discretionary review of large scale commercial development (5,000 – 15,000 square foot).

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #12a: Adopt and apply local development regulations and procedures to ensure protection of natural resources and fragile areas supporting appropriate levels of economic development.

OBJECTIVE #12b: Adopt regulations and procedures that provide clear direction to assist local decision making and consistency findings for zoning, divisions of land, and public and private projects.

OBJECTIVE #12c: Enforce, and amend as necessary, the Town zoning ordinance which includes designation(s) of permitted and conditional uses intensity and density criteria.

OBJECTIVE #12d: Evaluate development and redevelopment proposals according to goals, objectives, and policies and the land suitability analysis and future land use map developed as a part of this land use plan.

OBJECTIVE #12e: Establish mitigation criteria and concepts that may include but are not limited to cluster subdivision design, enacting local buffers, impervious surface limits, and effective innovative storm water management alternatives.

OBJECTIVE #12f: Develop and implement a storm water management plan.

ISSUE AREA #13: NATURAL HAZARD AREAS

GOAL #13: Conserve and maintain barrier dunes, beaches, wetlands, and other coastal features for their natural storm protection functions and their natural resources giving recognition to public health, safety, and welfare issues.

POLICY #13a: Duck will prevent the disruption of natural hazard areas by adopting and enforcing ordinances and procedures to regulate land use, development, and redevelopment and supports applicable State and Federal laws and regulations regarding land uses and development in areas of environmental concern.

POLICY #13b: Duck will review and analyze development and redevelopment proposals for consistency with the future land use map included in this land use plan.

POLICY #13c: Encourage the use of pervious materials and new technologies that provide for safe and efficient driveway and parking areas and that appropriately address storm water runoff areas.

POLICY #13d: Support State and Federal policies that regulate the location and intensity of development in State designated areas of environmental concern.

POLICY #13e: Discourage inappropriate development by limiting residential and commercial development density, structure size and development intensity.

POLICY #13f: Allow development and redevelopment within special flood hazard areas subject to the provisions and requirements of the National Flood Insurance Program, CAMA regulations, and the Town's zoning ordinance.

POLICY #13g: Adopt and periodically update a Hazard Mitigation Plan that addresses the Town's natural hazards and meets the requirements of the NC Division of Emergency Management and the Federal Emergency Management Agency.

POLICY #13h: Maintain or improve the Community Rating System (CRS) score to make the Town safer from flood risks and reduce premiums for Federal Flood Insurance.

POLICY #13i: Take steps locally and in conjunction with NCDOT and adjacent jurisdictions to improve traffic safety and drainage to mitigate the impact of localized flooding and seek alternative methods of hazard avoidance such as construction of the mid-Currituck (County) Bridge.

POLICY #13j: Regulate uses and activities in and on the Atlantic Ocean and Currituck Sound through adoption of overlay districts to address the impacts of development and redevelopment and uses on natural features to avoid introduction of hazards to these sensitive environmental resources.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #13a: Develop programs and regulations that minimize threats to life, property, and natural resources resulting from development located in or adjacent to hazard areas, such as those subject to erosion, high winds, storm surge, flooding, or sea level rise.

OBJECTIVE #13b: Develop location, density, and intensity criteria for new, existing development and redevelopment including public facilities and infrastructure so that they can better avoid or withstand natural hazards.

OBJECTIVE #13c: Support State efforts and initiatives to maintain shellfish water throughout the region.

OBJECTIVE #13d: Develop regulations for responsible development in flood plains.

ISSUE AREA #14: OVERHEAD UTILITY LINES

GOAL #14: Underground utilities.

POLICY #14a: Duck supports the placement or replacement of utility lines underground.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #14a: Consider regulations and/or incentives to have existing utility lines placed underground.

OBJECTIVE #14b: Study requiring underground utility placement in new developments and in commercial or group redevelopments.

ISSUE AREA #15: PARKING AND LOADING/OFF-LOADING AREAS

GOAL #15: Ensure adequate parking and loading/off-loading areas.

POLICY #15a: Duck supports the provision of well designed, properly marked and designated, and functional parking and loading/off-loading areas.

POLICY #15b: Duck will seek ways to provide and ensure a safe environment for pedestrians in commercial areas; to minimize pedestrian-vehicular conflicts in commercial areas; and, to improve circulation patterns in commercial areas.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #15a: Enforce, and amend as necessary, the Town zoning ordinance.

OBJECTIVE #15b: Develop commercial building/development design guidelines and standards.

OBJECTIVE #15c: Obtain technical assistance concerning parking and loading/off-loading improvements.

OBJECTIVE #15d: Study requiring bicycle racks at commercial establishments.

OBJECTIVE #15e: Examine opportunities for appropriate locations and funding for public parking areas.

OBJECTIVE #15f: Study the establishment of crosswalks at various locations in the Town's commercial areas.

ISSUE AREA #16: PUBLIC ACCESS

GOAL #16: Provide public access opportunities to beaches and public trust waters.

POLICY #16a: Duck will consider proposals to provide new public access opportunities to beaches and public trust waters and supports the development of a State funded shoreline access study to determine: an inventory of existing access facilities; the need for additional public access facilities, citizens' desires and preferences, and feasible location(s) and features of potential facilities.

POLICY #16b: Duck will review and analyze development and redevelopment proposals for consistency with the future land use map included in this land use plan.

POLICY 16c: Support maintenance of private community beach and Sound accesses which adequately serve the access requirements of year round and seasonal populations.

POLICY #16d: Develop and implement a grant program for community access improvements.

POLICY #16e: Seek opportunities, including memorandums of understanding, easements, and deeded property, for vehicular beach access(s) for the provision of municipal services.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #16a: Examine shoreline access issue to include the study and development of policies (to address access needs and opportunities, to include strategies to develop public access, and to identify feasible funding options) that

provide beach and public trust water access opportunities to all segments of the Town populace – including persons with disabilities – along the shoreline.

OBJECTIVE #16b: Pursue publicly held lands for public access development before considering privately held lands.

OBJECTIVE #16c: Examine opportunities for appropriate public accesses on publicly held lands.

OBJECTIVE #16d: Accept donations of land for use in developing appropriate public accesses.

OBJECTIVE #16e: Consider purchase or condemnation of land for use in developing appropriate public accesses.

OBJECTIVE #16f: Require new subdivisions of five lots or more to provide public access.

OBJECTIVE #16g: Develop cooperative agreements with neighborhood community associations and property owners for use of beach access sites during emergencies.

ISSUE AREA #17: PUBLIC SAFETY

GOAL #17: Ensure safety of residents and visitors.

POLICY #17a: Duck will adopt as necessary and enforce ordinances and procedures and support State and Federal laws and regulations to ensure public safety.

POLICY #17b: Duck will promote and maintain the image of Duck as a family vacation destination.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #17a: Enforce, and amend as necessary, the Town ordinance prohibiting beach fires and open burning.

OBJECTIVE #17b: Support the efforts and programs of the Duck Volunteer Fire Department, Ocean Rescue, Duck Police Department, Dare County Emergency Medical Services, the North Carolina Highway Patrol (State Police), the Dare County Sheriff's Department, Dare County Office of Emergency Management, and Currituck County Office of Emergency Management.

OBJECTIVE #17c: Develop regulations and programs that minimize threats to life, property, and natural resources resulting from development located in or adjacent to

hazard areas, such as those subject to erosion, high winds, storm surge, flooding, or sea level rise.

OBJECTIVE #17d: Develop location, density, and intensity criteria for new, existing development and redevelopment including public facilities and infrastructure so that they can better avoid or withstand natural hazards.

OBJECTIVE #17e: Use the Town website and quarterly newsletter to disseminate information to residents and visitors concerning emergency services, contact information, and related issues.

OBJECTIVE #17f: Develop, evaluate, and refine as necessary, a disaster management plan.

OBJECTIVE #17g: Seek ways to minimize conflicts between pedestrians and vehicles and improve safety along Duck Trail, particularly at cross streets and parking area entrances and exits.

OBJECTIVE #17h: Encourage the placement of appropriate signage and marking(s) along Duck Trail to improve safety.

OBJECTIVE #17i: Study designating crosswalks in the Town's commercial areas.

OBJECTIVE #17j: Support mutual aid agreements with area emergency services providers.

ISSUE AREA #18: REDEVELOPMENT

GOAL #18: Ensure redevelopment is consistent with Town image and land use and development goals.

POLICY #18a: Duck will provide clear direction to assist local decision making and consistency findings for zoning, divisions of land, and public and private projects.

POLICY #18b: Duck will ensure redevelopment is consistent with established community appearance standards, improves public safety, and protects or preserves the natural environment.

POLICY #18c: Duck will review and analyze development and redevelopment proposals for consistency with the future land use map included in this land use plan.

POLICY #18d: Duck will continue to regulate building intensity and oversized structures by enforcing, and amending as necessary, the zoning ordinance. The zoning ordinance regulates building intensity factors such as building height, lot coverage, and building setback(s) for commercial and residential building

development. The ordinance also specifies maximum and minimum building sizes for commercial buildings.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #18a: Monitor and consider redevelopment proposals for consistency with stated Town land use and development goals.

OBJECTIVE #18b: Enforce, and amend as necessary, the Town zoning ordinance which includes designation(s) of permitted and conditional uses intensity and density criteria.

OBJECTIVE #18c: Evaluate development and redevelopment proposals according to goals, objectives, and policies and the land suitability analysis and future land use map developed as a part of this land use plan.

OBJECTIVE #18d: Establish local mitigation criteria and concepts that may include but are not limited to cluster subdivision design, enacting local buffers, impervious surface limits, and effective innovative storm water management alternatives.

ISSUE AREA #19: RESIDENTIAL DEVELOPMENT

GOAL #19: Continue established single family residential development patterns.

POLICY #19a: Detached residential structures are the preferred type of residential land use in Duck.

POLICY #19b: Duck will review and analyze development and redevelopment proposals for consistency with the future land use map included in this land use plan.

POLICY #19cd: Duck will continue to regulate building intensity and oversized structures by enforcing, and amending as necessary, the zoning ordinance. The zoning ordinance regulates building intensity factors such as building height, lot coverage, and building setback(s) for commercial and residential building development. The ordinance also specifies maximum and minimum building sizes for commercial buildings.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #19a: Encourage, through the development review process, future development that is consistent with adopted goals, objectives, and policies and regulations including building code requirements and is in character with existing development with respect to features such as building size, lot coverage, architectural design standards, and construction materials and methods. Duck will evaluate development and redevelopment proposals according to goals, objectives, and

policies and the land suitability analysis and future land use map developed as a part of the land use plan.

OBJECTIVE #19b: Adopt regulations and procedures that provide clear direction to assist local decision making and consistency findings for zoning, divisions of land, and public and private projects.

OBJECTIVE #19c: Enforce, and amend as necessary, the Town the zoning ordinance including designation(s) of permitted and conditional use intensity and density criteria.

OBJECTIVE #19d Establish mitigation criteria and concepts that may include but are not limited to cluster subdivision design, enacting local buffers, impervious surface limits, and effective innovative storm water management alternatives.

OBJECTIVE #19e: Encourage stewardship, proper use, and maintenance of common areas in private developments by property owners and homeowner associations.

OBJECTIVE #19f: Disseminate information concerning applicable private restrictive covenants and public laws to property owners, residents, builders, and homeowners associations.

OBJECTIVE #19g: Encourage new residential development to respect the rights and consider the concerns of adjoining property owners with respect issues such including storm water runoff, line of sight, and vegetative buffer installation.

OBJECTIVE #19h: Evaluate development and redevelopment proposals to provide low-cost and moderate-cost housing alternatives in appropriate zoning districts according to Town goals, objectives, and policies and the land suitability analysis and future land use map developed as a part of the land use plan.

OBJECTIVE 19i: Encourage single-family and multi-family residential property owners to correct fire code violations and building safety deficiencies.

OBJECTIVE 19j: Disseminate information to (residential and commercial) property owners concerning requirements for rebuilding structures lost to fires and storms and other natural disasters.

ISSUE AREA #20: SEPTIC TANK USE

GOAL #20: Ensure properly installed and maintained septic tank/drain field systems.

POLICY #20a: Duck recognizes that the use of individual on-site sewage treatment is the primary method of wastewater treatment in Duck and supports the proper maintenance of systems.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #20a: Coordinate with Dare County Health Department to ensure that the performance of existing septic tank systems is monitored; that existing systems are properly maintained; and, that proposed systems are installed according to approved plans under the supervision.

OBJECTIVE #20b: Consider proposals for central public wastewater treatment systems.

OBJECTIVE #20c: Monitor technical improvements and advancements to on-site sewage disposal systems.

OBJECTIVE #20d: Study methods to monitor septic tank conditions and disseminate information concerning proper maintenance of septic tank and drain field systems.

OBJECTIVE #20e: Encourage, during the development process, the installation of protective measures to ensure septic tank(s) and drain fields(s) are isolated and not damaged by vehicles.

OBJECTIVE #20f: Consider proposals for package treatment plants when natural conditions prohibit the use of septic systems, as remedial efforts to correct existing failing septic improvements, or if required by ordinance and should be constructed to serve a specific development without excess capacity for off-site wastewater treatment connections. Maintenance of privately owned package treatment plants should be supervised by the NC Utilities Commission or other public agencies.

ISSUE AREA #21: SEXUALLY ORIENTED BUSINESSES

GOAL #21: Ensure there are no sexually oriented businesses in Duck.

POLICY #21a: Duck will adopt and enforce ordinances and procedures to regulate sexually oriented businesses and discourage the establishment of sexually oriented businesses within Duck.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #21a: Develop ordinances or regulations to prevent or discourage the establishment of sexually oriented businesses within Duck.

OBJECTIVE #21b: Enforce, and amend as necessary, the Town zoning ordinance.

ISSUE AREA #22: SOLID WASTE MANAGEMENT

GOAL #22: Provide efficient, economical collection and disposal of solid waste.

POLICY #22a: Duck supports the use of contracted solid waste collection and disposal, participation in a regional solid waste authority, and recycling efforts. Additional programs for hazardous materials disposal and large item pick-ups are also supported.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #22a: Continue to contract for solid waste collection and disposal services.

OBJECTIVE #22b: Monitor the demands placed on the system to determine if and when changes are needed.

OBJECTIVE #22c: Use the Town website and quarterly newsletter to disseminate information to residents and visitors concerning solid waste management system related issues.

OBJECTIVE #22d: Implement a recycling and vegetative waste management plan when economically feasible.

OBJECTIVE #22e: Work with local property rental firms and agencies to disseminate information to property owners, renters, and visitors about Town rules, procedures, and initiatives concerning use, placement, and retrieval of residential refuse containers.

OBJECTIVE #22f: Develop a hazard mitigation plan with a debris management element.

OBJECTIVE #22g: Require the provision of adequate waste receptacles prior to the issuance of a certificate of occupancy.

ISSUE AREA #23: STORM WATER MANAGEMENT

GOAL #23: Ensure comprehensive storm water management.

POLICY #23a: Duck supports the creation of plans and programs to minimize and mitigate the effects of storm water drainage and a comprehensive approach to storm water management.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #23a: Develop a storm water management plan and seek to implement (infrastructure) system improvements.

OBJECTIVE #23b: Encourage the North Carolina Department of Transportation to provide appropriate and timely response to storm water drainage issues within Duck.

OBJECTIVE #23c: Develop location, density, and intensity criteria for new, existing development and redevelopment including public facilities and infrastructure to adequately address storm water management needs.

OBJECTIVE #23d: Develop policies that minimize threats to life, property, and natural resources resulting from development located in or adjacent to hazard areas, such as those subject to erosion, high winds, storm surge, flooding, or sea level rise.

ISSUE AREA #24: TOURISM

GOAL #24: Continue as a family oriented tourist destination.

POLICY #24a: Duck supports and recognizes the vital importance of tourism to the local economy and supports efforts to maintain its status as a desirable place to visit and vacation. The Town also recognizes the need to address the infrastructure and service demands of the seasonal populations.

POLICY #24b: Duck supports the concept of combining natural resources and tourism to promote the area's ecological values, known as "eco-tourism" and supports passive recreation activities such as biking and walking/jogging.

POLICY #24c: Duck will encourage programs and initiatives to promote Duck as a family-oriented tourist destination.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #24a: Cooperate with the Outer Banks Visitors Bureau, appropriate State agencies, and the Duck business community to promote Duck as a tourist destination.

OBJECTIVE #24b: Use the Town website and quarterly newsletter to disseminate information to residents and visitors concerning events, schedules, and related issues.

OBJECTIVE #24c: Work with local property rental firms and agencies to disseminate information to property owners, renters, and visitors about Town rules, procedures, and initiatives concerning, but not limited to, beach maintenance and use.

ISSUE AREA #25: TOWN COMMONS AREA

GOAL #25: Create a public (Town) commons.

POLICY #25a: Duck is committed to the development of a Town commons area.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #25a: Acquire or accept suitable lands – with respect to size, location, and existing natural systems – for the creation of a public (Town) commons area which could be used as an open space, community gathering area, a site for passive recreation, and public access if appropriate.

OBJECTIVE #25b: Develop a master plan for a Town commons area.

ISSUE AREA #26: TRANSPORTATION

GOAL #26: Ensure a safe, efficient transportation system with NC 12 remaining a two-lane facility and the construction of a mid-Currituck County bridge.

POLICY #26a: Duck supports the construction of a mid-Currituck County bridge and maintenance of the existing two-lane configuration of NC 12 with the Duck Trail along NC 12 through Duck.

POLICY #26b: Duck encourages intergovernmental cooperation with other Outer Banks municipalities and surrounding counties to study of the transportation needs of Duck and the region.

POLICY #26c: Duck shall not be responsible for the cost of maintaining or repairs to privately owned streets. Experimental programs sponsored by the State to maintain private roads shall be supported.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #26a: Lobby for the construction of a mid-Currituck County bridge.

OBJECTIVE #26b: Lobby for maintaining NC 12 as a two-lane facility in its present configuration through Duck.

OBJECTIVE #26c: Encourage the North Carolina Department of Transportation to provide appropriate and timely levels of service within Duck.

OBJECTIVE #26d: Encourage the provision of a safe, efficient transportation system given State and local finances, topography, geography, and natural systems and surrounding land uses and development.

OBJECTIVE #26e: Consider proposals to provide private trolley service in Duck.

OBJECTIVE #26f: Encourage high levels of maintenance of private and State roads.

OBJECTIVE #26g: Require new developments and large scale redevelopments to build roads to State standards.

OBJECTIVE #26h: Enforce, and amend as necessary, the Town zoning ordinance and provisions regulating signs.

OBJECTIVE #26i: Study designating crosswalks in the Town's commercial areas.

OBJECTIVE #26j: Recognize the importance and significance of Duck Trail as a key transportation facility in and through Duck.

OBJECTIVE #26k: Work with Dare County to ensure that Duck's needs and goals are considered by the Rural Planning Organization.

ISSUE AREA #27: USES OF AND ACTIVITIES IN AND ON OCEAN AND SOUND WATERS

GOAL #27: Ensure safe, environmentally friendly water use.

POLICY #27a: Duck will adopt and enforce ordinances and procedures to appropriately regulate uses of and activities in and on the Atlantic Ocean and Currituck Sound.

POLICY #27b: Duck will encourage the safe and environmentally friendly use of the waters of the ocean and sound by residents and visitors alike; and, encourage private and public recreational uses within Town waters that are appropriate with respect to maintaining water quality, ensuring public safety, and ensuring quality of leisure experiences.

POLICY #27c: Duck will review and analyze development and redevelopment proposals for consistency with the future land use map included in this land use plan.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #27a: Regulate personal watercraft use.

OBJECTIVE #27b: Use the Town website and quarterly newsletter to disseminate information to residents and visitors concerning personal watercraft use, water quality, and related issues.

OBJECTIVE #27c: Develop, adopt, and enforce, and amend as necessary, a shoreline overlay zoning district to address development, redevelopment, and uses along shorelines and in adjacent waters.

ISSUE AREA #28: WATER QUALITY

GOAL #28: Maintain, protect, and where possible enhance water quality in all coastal wetlands and estuaries.

POLICY #28a: Duck will coordinate development review and enforcement of local ordinances with applicable State and Federal laws and regulations regarding protection and enhancement of water quality and areas of environmental concern.

POLICY #28b: Duck will review and analyze development and redevelopment proposals for consistency with the future land use map included in this land use plan.

POLICY #28c: Create landscaping provisions in Town ordinances to create vegetative buffers to assist in improvements of water quality.

POLICY #28d: Consider adoption of local erosion and sedimentation control, filling, and grading regulations to address and control adverse effects on water quality.

POLICY #28e: Undertake a comprehensive storm water management program that controls the amount and quality of storm water runoff that is consistent with maintaining and enhancing water quality in the Ocean and Sound.

POLICY #28f: Ensure that land use and development regulations are consistent with the proper management of water resources and applicable State and Federal development regulations.

Objectives that will help Duck achieve its goal and implement its policy include:

OBJECTIVE #28a: Assist the State to adopt policies for coastal waters to help ensure that water quality is maintained if not impaired and improved if impaired.

OBJECTIVE #28b: Assist the State to adopt policies that help prevent or control non-point source discharges (sewage and storm water) such as, but not limited to the following: impervious surface limits, vegetated riparian buffers, natural areas, natural area buffers, and wetland protection.

OBJECTIVE #28c: Support State efforts aimed at protecting open shell fishing waters and restoring closed or conditionally closed shell fishing waters.

OBJECTIVE #28d: Request adequate sampling of Currituck Sound waters by Dare County to ensure effective and timely analysis of water conditions within Duck to enable dissemination of timely information to the public.

OBJECTIVE #28e: Use the Town website and quarterly newsletter to disseminate information to residents and visitors concerning water quality and related issues.

OBJECTIVE #28f: Support State and Federal programs and initiatives to reduce and control pollution from water craft.

OBJECTIVE #28g: Support efforts and programs to monitor and protect the Duck aquifer as a potential potable water resource and ensure any future utilization of the aquifer benefits Town residents and property owners.

OBJECTIVE #28h: Support efforts and programs to restore shellfish waters.

D. Future Land Use

1. Land Classification Scheme

The land classification scheme serves to explain and display the Town's vision and preferences for future land use within its borders. As with any plan, it is subject to change as circumstances may dictate and should be reviewed by the Town on a regular basis with citizen input and involvement. The land classification scheme does not preclude, supercede, negate, or repeal current or future zoning regulations and districts in Duck; nor does the land classification scheme supercede any private restrictive covenants in force. The land classification scheme utilized by the Town was chosen based on its appropriateness for the goals and policies developed by the Town as well as the purpose for which the plan is used and the Town's capacity to implement the plan. A land use design approach was chosen by Duck for its land classification scheme. The land use design approach includes the designation of typical functional land use areas which include: 1) conservation, open space, and community facilities areas, 2) residential areas, 3) general commercial areas, 4) village commercial areas, 5) transitional areas, and 6) in-fill and growth areas.

Conservation, open space, and community facilities areas are areas conducive to and appropriate for public and private recreational facilities such as trails and parks, public and private utilities and facilities, governmental uses, and conservation. Maintaining the openness of these spaces should be the Town's goal. Uses should be minimal and low impact and contribute to maintaining the Town's image and character. Two prominent public conservation, open space, and community facilities areas are the Federal property (U.S. Army Corps of Engineers Research Facility) and Town-owned property along NC 12 in Duck Village to be the site of the Town Commons.

Residential areas should provide for the low-density development of single-family detached dwellings in an environment which preserves natural features to the extent possible and promotes stable, permanent neighborhoods. In some parts of Duck, residential areas should provide for the development of moderate density residential neighborhoods (with a mix of permanent and short-term seasonal residences) and serve as a transition zone between the low density areas and more densely developed areas.

General commercial areas include areas that primarily encourage the concentration of commercial facilities in clusters or group developments and to provide readily accessible shopping facilities and will provide for the proper grouping and development of commercial facilities to serve permanent and seasonal residents and the general public. Group developments are envisioned and should be encouraged.

Village commercial areas are areas that should provide limited mixed use commercial and residential areas to serve existing or developing residential neighborhoods in the Town and to provide the goods and services needed by permanent and seasonal visitors. Group developments are envisioned and should be encouraged in these areas. Mixed-use designation allows for a maximum .5 floor area ratio.

Consistent with the Future Land Use Map, the Town prefers 2-3 story residential and commercial structures, generally 35' in height or less. Low density residential development refers to 0-4 dwelling units per acre. Low intensity commercial development (5,000 square foot or less by right on 20,000 square foot lots (generally in the range of a .25 floor area ration) is preferred. Existing, non-conforming structures that are medium density (8-12 dwelling units per acre) are not the preferred type land use in Town. Such uses are no longer allowed in most zoning districts.

Transitional areas are areas that should allow broad flexibility of services and uses with density limitations, setbacks, parking requirements, and other general requirements. A wide spectrum of uses is envisioned for transitional areas. Uses envisioned for in-fill and growth areas will likely include single family, detached residential subdivisions.

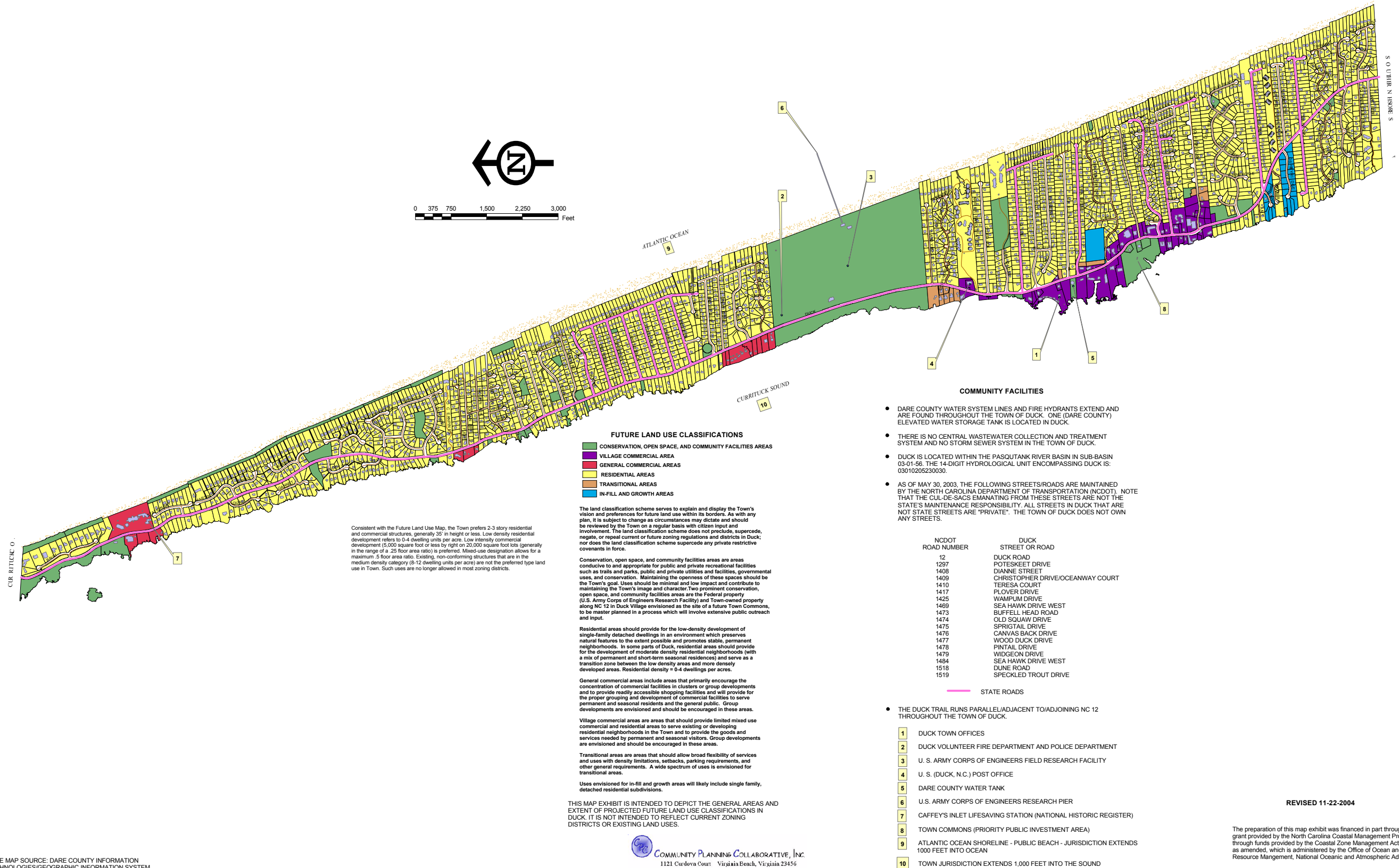
2. Future Land Use Map

In addition to showing the general extents of the land classifications, EXHIBIT IX-B, Future Land Use Map shows the 14 digit hydrological unit encompassing Duck and the existing road network serving the Town. Dare County water system lines and fire hydrants extend and are found throughout the Town. One (Dare County) elevated water storage tank is located in Duck. There is no central wastewater collection and treatment system and no storm sewer system in Duck. At present, no major community facilities' extensions or development is planned except for the Town Commons project. To date, the Town has committed \$4.5 million to the project which is in the architectural/engineering design phase. During the planning period, the Town will develop a Capital Improvements Plan.

The composite environmental conditions map and the land suitability analysis map helped to develop the future land use map (EXHIBIT IX-B). The Town visually compared its future land use map, composite environmental conditions map, and the land suitability analysis map by overlaying color versions of each map with vellums (black and white, see through) of other maps. From this process, a high level of

consistency was apparent and noted between the maps. EXHIBIT IX-C provides the estimated amount of land envisioned for the various future land use classifications.

EXHIBIT IX-B
DUCK, NORTH CAROLINA
FUTURE LAND USE MAP



**EXHIBIT IX-C
DUCK, NORTH CAROLINA
PROJECTED FUTURE LAND USE TOTALS**

FUTURE LAND USE CLASSIFICATION	AREA IN ACRES*
Conservation, open space, and community facilities areas	232.26
Village commercial areas	49.89
General commercial areas	25.41
Residential areas	959.00
Transitional areas	8.87
In-fill and growth areas	17.67
TOTAL AREA	1,293.10

*Estimated. These figures represent the areas of the future land use classifications shown on EXHIBIT IX-B. Rights of way, easements, etc. and Town controlled areas extending into the Atlantic Ocean and Currituck Sound are not included.

E. Policy Analysis

1. Consistency With Management Topics

State CAMA planning guidelines require an analysis to “demonstrate how the land use and development goals, policies and future land use map...will guide development in a manner that is consistent with the specific management goal(s), planning objectives(s), and land use plan requirements of each Management Topic” [.0702 (d)(2)(A)].

The sections and exhibits which follow demonstrate that the Town’s goals, policies, and future land use map will guide development in a manner that is consistent with each component of the Management Topics. The Management Topics are summarized in EXHIBIT IX-A on page IX-2 of this chapter.

a. Consistency of Town Goals With Management Topics

EXHIBIT IX-D describes the consistency between the Town’s goals as contained in this land use plan with the Management Topics.

EXHIBIT IX-D DUCK, NORTH CAROLINA CONSISTENCY REVIEW-DUCK GOALS AND MANAGEMENT TOPICS

<u>ISSUE AREA</u>	<u>GOAL STATEMENT</u>	<u>CONSISTENCY WITH MANAGEMENT TOPICS</u>
1. Atlantic Ocean Shoreline	Goal #1, pg. IX-6	The Town's goal is consistent with the land use compatibility, natural hazard areas, public access, and water quality management topics as it seeks to preserve, protect, and enhance the shoreline and to ensure its use for passive and active recreation and leisure activities.
2. Beach Driving	Goal #2, pg. IX-7	The Town's goal is consistent with the land use compatibility management topic as it seeks to regulate beach driving.
3. Beach Re-nourishment and Maintenance	Goal #3, pg. IX-7	The Town's goal is consistent with the land use compatibility, natural hazard areas, and water quality management topics as it seeks to encourage beach re-nourishment and maintenance.
4. Commercial Development	Goal #4, pg. IX-8	The Town's goal is consistent with the land use compatibility management topic as it seeks to ensure commercial development of small specialty type shops and the vitality of existing businesses continues.
5. Community Appearance	Goal #5, pg. IX-9	The Town's goal is consistent with the land use compatibility management topic as it seeks to maintain its coastal village image.
6. Currituck Sound Shoreline	Goal #6, pg. IX-10	The Town's goal is consistent with the land use compatibility, natural hazard areas, public access, and water quality management topics as it seeks to preserve, protect, and enhance the shoreline and to ensure its use for passive and active recreation and leisure activities.
7. Development Design Standards	Goal #7, pg. IX-11	The Town's goal is consistent with the land use compatibility management topic as it seeks to manage land use and development to minimize primary and secondary impacts on resources through standards for developments.

EXHIBIT IX-D (continued)
DUCK, NORTH CAROLINA
CONSISTENCY REVIEW-DUCK GOALS
AND MANAGEMENT TOPICS

<u>ISSUE AREA</u>	<u>GOAL STATEMENT</u>	<u>CONSISTENCY WITH MANAGEMENT TOPICS</u>
8. Duck Trail	Goal #8, pg. IX-11	The Town's goal is consistent with the infrastructure carrying capacity management topic as it seeks to provide infrastructure to serve existing and anticipated development, maintain its coastal village image, and promote safe and efficient pedestrian movement.
9. Federal Properties	Goal #9, pg. IX-12	The Town's goal is consistent with the land use compatibility, natural hazard areas, and water quality management topics as it seeks to ensure Federal properties and programs are used in a manner consistent with the Town's character and image.
10. Infrastructure Carrying Capacity and Provision of Public Facilities and Services	Goal #10, pg. IX-13	The Town's goal is essentially a restatement of the infrastructure carrying capacity management topic.
11. Intergovernmental Relations	Goal #11, pg. IX-14	The Town's goal is consistent with the infrastructure carrying capacity and land use compatibility management topics as it seeks cooperation and interaction between government agencies which will help to facilitate the provision of adequate and planned infrastructure and managed land use and development.
12. Land Use Compatibility	Goal #12, pg. IX-15	The Town's goal is essentially a restatement of the land use compatibility management topic.
13. Natural Hazard Areas	Goal #13, pg. IX-16	The Town's goal is consistent with the land use compatibility, natural hazard areas, and water quality management topics as it seeks to conserve protective functions of dunes, beaches, wetlands, flood plains, and other shoreline features.
14. Overhead Utility Lines	Goal #14, pg. IX-17	The Town's goal is consistent with the infrastructure carrying capacity management topic as it seeks to provide infrastructure to serve existing and anticipated development, maintain its coastal village image, and promote safe and efficient pedestrian movement.

EXHIBIT IX-D (continued)
DUCK, NORTH CAROLINA
CONSISTENCY REVIEW-DUCK GOALS
AND MANAGEMENT TOPICS

<u>ISSUE AREA</u>	<u>GOAL STATEMENT</u>	<u>CONSISTENCY WITH MANAGEMENT TOPICS</u>
15. Parking and Loading/Off-Loading Areas	Goal #15, pg. IX-17	The Town's goal is consistent with the infrastructure carrying capacity management topic as it seeks to provide infrastructure to serve existing and anticipated development, maintain its coastal village image, and promote safe and efficient pedestrian movement.
16. Public Access	Goal #16, pg. IX-18	The Town's goal is consistent with the public access management topic as it seeks to provide public access opportunities.
17. Public Safety	Goal #17, pg. IX-19	The Town's goal is consistent with the infrastructure carrying capacity management topic as it seeks to provide infrastructure to serve existing and anticipated development.
18. Redevelopment	Goal #18, pg. IX-20	The Town's goal is consistent with the land use compatibility, natural hazards, infrastructure carrying capacity, and water quality management topics as it seeks environmentally friendly and sustainable development consistent with its image and character.
19. Residential Development	Goal #19, pg. IX-21	The Town's goal is consistent with the land use compatibility, natural hazards, infrastructure carrying capacity, and water quality management topics as it seeks environmentally friendly and sustainable development consistent with its image and character.
20. Septic Tank Use	Goal #20, pg. IX-22	The Town's goal is consistent with the infrastructure carrying capacity, water quality, and land use compatibility management topics as it seeks properly installed and maintained septic systems and managed land use and development.
21. Sexually Oriented Businesses	Goal #21, pg. IX-23	The Town's goal is consistent with the land use compatibility management topic as it seeks to maintain its coastal village image.
22. Solid Waste Management	Goal #22, pg. IX-23	The Town's goal is consistent with the infrastructure carrying capacity management topic as it seeks to provide infrastructure to serve existing and anticipated development.

EXHIBIT IX-D (continued)
DUCK, NORTH CAROLINA
CONSISTENCY REVIEW-DUCK GOALS
AND MANAGEMENT TOPICS

<u>ISSUE AREA</u>	<u>GOAL STATEMENT</u>	<u>CONSISTENCY WITH MANAGEMENT TOPICS</u>
23. Storm Water Management	Goal #23, pg. IX-24	The Town's goal is consistent with the infrastructure carrying capacity management topic as it seeks to provide infrastructure to existing and anticipated development and the land use compatibility, natural hazard area, and water quality management topics as it seeks to conserve protective functions of wetlands, flood plains, and other coastal shoreline features.
24. Tourism	Goal #24, pg. IX-25	The Town's goal is consistent with the land use compatibility, natural hazard areas, public access, and water quality management topics as it seeks to preserve, protect, and enhance the shoreline and to ensure its use for passive and active recreation and leisure activities. The Town's goal is also consistent with the land use compatibility management topic it seeks to ensure commercial development of small specialty type shops and the vitality of existing businesses continues.
25. Town Commons Areas	Goal #25, pg. IX-25	The Town's goal is consistent with the land use compatibility, natural hazard areas, and water quality management topics as it seeks to ensure Town-owned properties are used in a manner consistent with the Town's character and image.
26. Transportation	Goal #26, pg. IX-26	The Town's goal is consistent with the infrastructure carrying capacity management topic as it seeks to provide infrastructure to existing and anticipated development through NC 12 remaining a two-lane facility in its present location and through the construction of a mid-Currituck County bridge.
27. Uses of and Activities in and on Ocean and Sound Waters	Goal #27, pg. IX-27	The Town's goal is consistent with the land use compatibility, natural hazard areas, and water quality management topics as it seeks to ensure ocean and sound waters are used in a manner consistent with the Town's character and image, in a manner that preserves, protects, and enhances public trust waters, and ensures their use for passive and active recreation and leisure activities.
28. Water Quality	Goal #28, pg. IX-28	The Town's goal is essentially a restatement of the water quality management topic.

b. General Direction of Policies

EXHIBIT IX-E summarizes the general direction of Duck's policies.

EXHIBIT IX-E DUCK, NORTH CAROLINA GENERAL DIRECTION OF TOWN POLICIES

<u>ISSUE AREA</u>	<u>POLICY</u>	<u>GENERAL POLICY DIRECTION</u>
1. Atlantic Ocean Shoreline	Policy #1, pg. IX-6	The Town supports the continued management of oceanfront shoreline development to protect and preserve the natural and recreational resources along the oceanfront. Duck will use its police powers to adopt and enforce ordinances and procedures to regulate land use, development, and redevelopment and supports applicable State and Federal laws and regulations regarding building, land uses, and development in areas of environmental concern.
2. Beach Driving	Policy #2, pg. IX-7	The Town will use its police powers to adopt and enforce ordinances and procedures to regulate beach driving.
3. Beach Re-nourishment and Maintenance	Policy #3, pg. IX-7	The Town supports the concepts of beach re-nourishment and maintenance as the preferred shoreline management alternative along the ocean beach.
4. Commercial Development	Policy #4, pg. IX-8	The Town supports small specialty type shops, commercial development design standards, patronage of local businesses; planned/clustered commercial development; and, use of police powers to regulate land use, redevelopment, and placement of commercial development.
5. Community Appearance	Policy #5, pg. IX-9	The Town will use its police powers to regulate land use, development, redevelopment, and community appearance.
6. Currituck Sound Shoreline	Policy #6, pg. IX-10	The Town will use its police powers to regulate land use, development, and redevelopment and supports State and Federal laws regarding building, land uses, and development in areas of environmental concern. Duck supports management of the Currituck Sound shoreline and the CAMA permit program.
7. Development Design Standards	Policy #7, pg. IX-11	The Town supports the concept of development design standards.

EXHIBIT IX-E (continued)
DUCK, NORTH CAROLINA
GENERAL DIRECTION OF TOWN POLICIES

<u>ISSUE AREA</u>	<u>POLICY</u>	<u>GENERAL POLICY DIRECTION</u>
8. Duck Trail	Policy #8, pg. IX-11	The Town supports the continued maintenance of the Duck Trail and efforts to enhance, improve, and expand the facility to provide a safe setting for recreation and as an alternative transportation route.
9. Federal Properties	Policy #9, pg. IX-12	The Town supports applicable Federal laws and regulations regarding land uses and development in areas of environmental concern.
10. Infrastructure Carrying Capacity and Provision of Public Facilities and Services	Policy #10, pg. IX-13	The Town supports adequate public systems and services.
11. Intergovernmental Relations	Policy #11, pg. IX-14	The Town supports intergovernmental relations and multi-jurisdictional efforts to solve problems.
12. Land Use Compatibility	Policy #12, pg. IX-15	The Town will use its police powers to regulate land use, development, and redevelopment and supports State and Federal laws regarding building, land uses, and development in areas of environmental concern.
13. Natural Hazard Areas	Policy #13, pg. IX-16	The Town will use its police powers to regulate land use, development, and redevelopment and supports State and Federal laws regarding building, land uses, and development in areas of environmental concern.
14. Overhead Utility Lines	Policy #14, pg. IX-17	The Town supports the placement or replacement of utility lines underground.
15. Parking and Loading/Off-Loading Areas	Policy #15, pg. IX-17	The Town supports the provision of well designed, properly marked and designated, and functional parking and loading/off-loading areas.
16. Public Access	Policy #16, pg. IX-18	The Town will consider proposals to provide additional accesses and supports a State funded shoreline access study.
17. Public Safety	Policy #17, pg. IX-19	The Town supports adequate public systems and services and will use its police powers to adopt and enforce ordinances and procedures to regulate land use, development, and redevelopment. Duck supports the enforcement of criminal statute.

EXHIBIT IX-E (continued)
DUCK, NORTH CAROLINA
GENERAL DIRECTION OF TOWN POLICIES

<u>ISSUE AREA</u>	<u>POLICY</u>	<u>GENERAL POLICY DIRECTION</u>
18. Redevelopment	Policy #18, pg. IX-20	The Town will use its police powers to regulate land use, development, and redevelopment and supports State and Federal laws regarding building, land uses, and development in areas of environmental concern.
19. Residential Development	Policy #19, pg. IX-21	The Town will use its police powers to regulate land use, development, and redevelopment and supports State and Federal laws regarding building, land uses, and development. Detached residential structures are the preferred type of residential land use in Duck.
20. Septic Tank Use	Policy #20, pg. IX-22	The Town supports the use of individual, on-site sewage disposal systems. Package treatment plants should only be used when natural conditions prohibit the use of septic systems, as remedial efforts to correct existing failing septic systems, or if required by ordinance.
21. Sexually Oriented Businesses	Policy #21, pg. IX-23	The Town will use its police powers to adopt and enforce ordinances and procedures to regulate sexually oriented businesses.
22. Solid Waste Management	Policy #22, pg. IX-24	The Town supports the use on contracted solid waste collection and disposal, continued participation in a regional solid waste authority, and voluntary recycling.
23. Storm Water Management	Policy #23, pg. IX-24	The Town supports efforts and programs to minimize and mitigate the effects of storm water drainage.
24. Tourism	Policy #24, pg. IX-25	The Town supports and recognizes the vital importance of tourism to the local economy and supports efforts to maintain its status as a desirable place to visit and vacation. The Town also recognizes the need to address the infrastructure and service demands of the seasonal populations. Duck supports the concept of "eco-tourism" and supports passive recreational activities.
25. Town Commons Area	Policy #25, pg. IX-25	The Town supports the concept of a Town commons area.

EXHIBIT IX-E (continued)
DUCK, NORTH CAROLINA
GENERAL DIRECTION OF TOWN POLICIES

<u>ISSUE AREA</u>	<u>POLICY</u>	<u>GENERAL POLICY DIRECTION</u>
26. Transportation	Policy #26, pg. IX-26	The Town supports the construction of a mid-Currituck County bridge and the continued two-lane configuration of NC 12 with the Duck Trail along NC 12 through Duck.
27. Uses of and Activities in and On Ocean and Sound Waters	Policy #27, pg. IX-27	The Town will use its police powers to adopt and enforce ordinances and procedures to regulate uses of and activities in and on the Atlantic Ocean and Currituck Sound.
28. Water Quality	Policy #28, pg. IX-28	The Town will use its police powers to regulate land use, development, and redevelopment and supports State and Federal laws regarding building, land uses, and development in areas of environmental concern.

c. Consistency of Future Land Use Map and Land Use Plan Requirements

The future land use map (EXHIBIT IX-B, page IX-27) includes six land classifications. The residential density and development intensity anticipated in the land classifications shown on the future land use map are as follows:

- Conservation, open space, and community facilities areas are public and private properties not likely to experience any residential development.
- Village commercial areas are likely to experience high to medium density commercial development and very limited, if any, residential development.
- General commercial areas are areas wherein no residential development is likely to occur.
- Residential areas are likely to experience high to medium density residential development.
- Transitional areas are likely to experience limited low to medium residential development.
- In-fill and growth areas are likely to experience medium to high density residential development.

The future land use map was developed using the composite environmental conditions map (EXHIBIT IV-C, page IV-7) and the land suitability analysis map (EXHIBIT VII-C, page VII-7) as the primary guiding tools. Portions of most all of the land classifications envisioned by the Town are projected to occur or continue in areas wherein any development constraints (hazards and limitations) present may be addressed by methods such as restrictions on types of land uses, special site planning, or the provision of public services, as shown on the composite environmental

conditions map. Generally, these areas are also found in areas of the Town shown as having medium to high suitability for development according to the land suitability analysis.

Portions of all of the land classifications envisioned by the Town as shown on the future land use map contain areas shown on the composite environmental conditions map as having development constraints (hazards and limitations) present that may be addressed by methods such as restrictions on types of land uses, special site planning, or the provision of public services or contain serious hazards for development or lands where the impacts of development would cause serious damage to the values of natural systems. Generally, these areas are found in areas of the Town shown as having low suitability or being least suitable for development according to the land suitability analysis.

No material differences appear between the development patterns shown on the future land use map and the development constraints shown on the natural systems composite map and the land suitability patterns shown on the land suitability map.

There are no material differences between the spatial patterns of land classifications that depend on public water and sewer and the planned development or extension of water and sewer. Public water is available to areas developed or likely to develop. No public sewer is planned for or by Duck.

Projected land use patterns, density, and intensity will continue to impact the Town's evacuation infrastructure which is comprised of NC 12.

Limited development, if any, is likely to occur in the Town's natural hazard areas. There are no open shell fish waters in Duck.

2. Impact of Town Policies on Management Topics

CAMA guidelines require that the land use plan contain "a description of the type and extent of analysis completed to determine the impact of CAMA Land Use Plan policies on the Management Topics. Both positive and negative impacts of...policies on the Management Topics must be described. Policies that have any negative impacts on Management Topics must include a description of the policies, methods, programs and processes (either currently in place or included in the plan) to mitigate any negative impacts..."[.0702(d)(2)(B)].

EXHIBIT IX-F is a matrix describing the analysis of the impacts of Town policies on Management Topics. The goals, planning objectives, and land use plan requirements for each Management Topic have been summarized into benchmarks. References to Town policies are listed in the left column and each Town policy is compared to the Management Topic benchmarks and whether it is beneficial, neutral, or detrimental to attainment of the policy benchmark labeled.

EXHIBIT IX-F
DUCK, NORTH CAROLINA
POLICY ANALYSIS MATRIX ~
TOWN POLICIES AS BENEFICIAL, NEUTRAL, OR DETRIMENTAL TO
STATE MANAGEMENT TOPIC BENCHMARKS

State Management Topics	Public Access	Land Use Compatibility	Infrastructure	Natural Hazards	Water Quality
Benchmarks	More planned access locations Upgrades to existing access locations	Reduction in habitat loss and fragmentation related to impacts of land use and development Reduction of water resource and water quality degradation	Water, sewer, and other key community facilities and services being available in required locations at adequate capacities to support planned community growth and development patterns	Land uses and development patterns that reduce vulnerability to natural hazards Land uses and development patterns that take into account the existing and planned capacity of evacuation infrastructure	Land use and development criteria and measures that abate impacts that degrade water quality
Town Land Use and Development Policies					
1. Atlantic Ocean Shoreline, Policy #1, pg. IX-6	BENEFICIAL	BENEFICIAL	NEUTRAL	BENEFICIAL	BENEFICIAL
2. Beach Driving, Policy #2, pg. IX-7	NEUTRAL	NEUTRAL	NEUTRAL	NEUTRAL	NEUTRAL
3. Beach Renourishment and Maintenance, Policy #3, pg. IX-7	NEUTRAL	NEUTRAL	NEUTRAL	NEUTRAL	NEUTRAL
4. Commercial Development, Policy #4, pg. IX-8	NEUTRAL	BENEFICIAL	NEUTRAL	NEUTRAL	NEUTRAL

EXHIBIT IX-F (continued)
DUCK, NORTH CAROLINA
POLICY ANALYSIS MATRIX~
TOWN POLICIES AS BENEFICIAL, NEUTRAL, OR DETRIMENTAL TO
STATE MANAGEMENT TOPIC BENCHMARKS

State Management Topics	Public Access	Land Use Compatibility	Infrastructure	Natural Hazards	Water Quality
Benchmarks Town Land Use and Development Policies	More planned access locations Upgrades to existing access locations	Reduction in habitat loss and fragmentation related to impacts of land use and development Reduction of water resource and water quality degradation	Water, sewer, and other key community facilities and services being available in required locations at adequate capacities to support planned community growth and development patterns	Land uses and development patterns that reduce vulnerability to natural hazards Land uses and development patterns that take into account the existing and planned capacity of evacuation infrastructure	Land use and development criteria and measures that abate impacts that degrade water quality
5. Community Appearance, Policy #5, pg. IX-9	NEUTRAL	NEUTRAL	NEUTRAL	NEUTRAL	NEUTRAL
6. Currituck Sound Shoreline, Policy #6, pg. IX-10	BENEFICIAL	BENEFICIAL	NEUTRAL	BENEFICIAL	BENEFICIAL
7. Development Design Standards, Policy #7, pg. IX-11	NEUTRAL	BENEFICIAL	NEUTRAL	NEUTRAL	NEUTRAL
8. Duck Trail, Policy #8, pg. IX-11	NEUTRAL	NEUTRAL	BENEFICIAL	NEUTRAL	NEUTRAL

EXHIBIT IX-F (continued)
DUCK, NORTH CAROLINA
POLICY ANALYSIS MATRIX~
TOWN POLICIES AS BENEFICIAL, NEUTRAL, OR DETRIMENTAL TO
STATE MANAGEMENT TOPIC BENCHMARKS

[illegible]

EXHIBIT IX-F (continued)
DUCK, NORTH CAROLINA
POLICY ANALYSIS MATRIX~
TOWN POLICIES AS BENEFICIAL, NEUTRAL, OR DETRIMENTAL TO
STATE MANAGEMENT TOPIC BENCHMARKS

State Management Topics	Public Access	Land Use Compatibility	Infrastructure	Natural Hazards	Water Quality
Benchmarks	More planned access locations Upgrades to existing access locations	Reduction in habitat loss and fragmentation related to impacts of land use and development Reduction of water resource and water quality degradation	Water, sewer, and other key community facilities and services being available in required locations at adequate capacities to support planned community growth and development patterns	Land uses and development patterns that reduce vulnerability to natural hazards Land uses and development patterns that take into account the existing and planned capacity of evacuation infrastructure	Land use and development criteria and measures that abate impacts that degrade water quality
Town Land Use and Development Policies					
14. Overhead Utility Lines, Policy #14, pg. IX-17	NEUTRAL	NEUTRAL	BENEFICIAL	NEUTRAL	NEUTRAL
15. Parking and Loading/Off-Loading Areas, Policy #14, pg. IX-17	NEUTRAL	NEUTRAL	BENEFICIAL	NEUTRAL	NEUTRAL
16. Public Access, Policy #16, pg. IX-18	BENEFICIAL	NEUTRAL	NEUTRAL	NEUTRAL	NEUTRAL
17. Public Safety, Policy #17, pg. IX-19	NEUTRAL	NEUTRAL	BENEFICIAL	NEUTRAL	NEUTRAL
18. Redevelopment, Policy #18, pg. IX-20	NEUTRAL	BENEFICIAL	BENEFICIAL	BENEFICIAL	NEUTRAL

EXHIBIT IX-F (continued)
DUCK, NORTH CAROLINA
POLICY ANALYSIS MATRIX~
TOWN POLICIES AS BENEFICIAL, NEUTRAL, OR DETRIMENTAL TO
STATE MANAGEMENT TOPIC BENCHMARKS

State Management Topics	Public Access	Land Use Compatibility	Infrastructure	Natural Hazards	Water Quality
<p>Benchmarks</p> <p>More planned access locations</p> <p>Upgrades to existing access locations</p> <p>Town Land Use and Development Policies</p>		<p>Reduction in habitat loss and fragmentation related to impacts of land use and development</p> <p>Reduction of water resource and water quality degradation</p>	<p>Water, sewer, and other key community facilities and services being available in required locations at adequate capacities to support planned community growth and development patterns</p>	<p>Land uses and development patterns that reduce vulnerability to natural hazards</p> <p>land uses and development patterns that take into account the existing and planned capacity of evacuation infrastructure</p>	<p>Land use and development criteria and measures that abate impacts that degrade water quality</p>
19. Residential Development, Policy #19, pg. IX-21	NEUTRAL	BENEFICIAL	BENEFICIAL	BENEFICIAL	BENEFICIAL
20. Septic Tank Use, Policy #20, pg. IX-22	NEUTRAL	BENEFICIAL	BENEFICIAL	NEUTRAL	BENEFICIAL
21. Sexually Oriented Businesses, Policy #21, pg. IX-23	NEUTRAL	NEUTRAL	NEUTRAL	NEUTRAL	NEUTRAL
22. Solid Waste Management, Policy #22, pg. IX-24	NEUTRAL	NEUTRAL	BENEFICIAL	NEUTRAL	NEUTRAL
23. Storm Water Management, Policy #23, pg. IX-24	NEUTRAL	BENEFICIAL	BENEFICIAL	BENEFICIAL	BENEFICIAL
24. Tourism, Policy #24, pg. IX-25	NEUTRAL	NEUTRAL	NEUTRAL	NEUTRAL	NEUTRAL
25. Town Commons Areas, Policy #25, pg. IX-25	BENEFICIAL	NEUTRAL	BENEFICIAL	NEUTRAL	NEUTRAL

EXHIBIT IX-F (continued)
DUCK, NORTH CAROLINA
POLICY ANALYSIS MATRIX~
TOWN POLICIES AS BENEFICIAL, NEUTRAL, OR DETRIMENTAL TO
STATE MANAGEMENT TOPIC BENCHMARKS

State Management Topics	Public Access	Land Use Compatibility	Infrastructure	Natural Hazards	Water Quality
<p>Benchmarks</p> <p>More planned access locations</p> <p>Upgrades to existing access locations</p> <p>Town Land Use and Development Policies</p>		<p>Reduction in habitat loss and fragmentation related to impacts of land use and development</p> <p>Reduction of water resource and water quality degradation</p>	Water, sewer, and other key community facilities and services being available in required locations at adequate capacities to support planned community growth and development patterns	<p>Land uses and development patterns that reduce vulnerability to natural hazards</p> <p>Land uses and development patterns that take into account the existing and planned capacity of evacuation infrastructure</p>	Land use and development criteria and measures that abate impacts that degrade water quality
26. Transportation, Policy #26, pg. IX-26	NEUTRAL	NEUTRAL	BENEFICIAL	NEUTRAL	NEUTRAL
27. Uses of and Activities in and on Ocean and Sound Waters, Policy #27, pg. IX-27	BENEFICIAL	NEUTRAL	NEUTRAL	NEUTRAL	BENEFICIAL
28. Water Quality, Policy #28, pg. IX-28	NEUTRAL	NEUTRAL	NEUTRAL	NEUTRAL	BENEFICIAL

Chapter X: Tools for Managing Development

Taken together, this chapter and the preceding one (Chapter IX, Plan for the Future), are arguably the most important parts of the land use plan. Together, they state the Town's goals, objectives, and policies and its strategies, action plan, and schedule for implementing policies. In this chapter, State guidelines require identification and description of the tools and the actions that Duck has selected to implement its land use plan. This chapter has four parts:

- Guide for land use decision-making. (Description of the role of the plan and the status of its policies in Duck's land use and development decisions.)
- Existing development management program. (Description of Duck's existing policies, ordinances, codes, and regulations and how they will be coordinated and employed to implement the land use and development policies.)
- Additional tools. (Additional tools, such as new or amended ordinances, capital improvements, property acquisition, or other specific projects, selected by Duck to implement the plan.)
- Action plan and schedule. (Description of the priority actions that Duck will take to implement the plan and a general schedule for accomplishing these actions.)

A. Guide for Land Use Decision-Making

The land use plan should be used by the Town's elected and appointed officials and the community as a guide in making decisions about or that affect land use and development. It is generally accepted that the policies and the future land use map are decision-making guides and that they do not have the force of law. However, in considering the roles and status of the plan, the Town must remain cognizant that the policies and the map are frequently used in a "regulatory" manner in the issuance of State and Federal permits. For example, consistency with the local land use plan is a major consideration in the issuance of major and minor CAMA development permits.

The land use plan and its policies serve short-term purposes, and the plan is used by various sectors. Developers and/or others seeking Town review or intervention may consult the policies to formulate a request that is consistent with the policies, thereby increasing the chances of approval. The Town staff will review requests in light of policies, pointing out relevant policies: (1) that support the request; (2) that are in conflict; and (3) that carry the most weight, thereby shaping the overall staff response. Planning Board members can make individual determinations as to the consistency of the request with the policies. The Planning Board may consider staff recommendation,

but may choose to give different weights to the policies. The general public can reference the policies when speaking in favor of or against a petition. Town Council can take into account and weigh the policy interpretations by the petitioner, the staff, the Planning Board, and residents, as well as its own interpretations and priorities in making its decision.

The land use plan also serves important long-term functions. It gives guidance to new development management tools and to major adjustments of existing tools. The plan may be used in the development of plans for major capital facilities. And finally, it may guide the development of plans for projects that support implementation of the plan.

The land use plan's function with respect to zoning is of prime importance. Proper administration of the Duck zoning ordinance requires any review of a proposed text or map amendment – whether by the staff, the Planning Board, and the Town Council – to be based on consideration of whether the proposed amendment is consistent with the land use plan and otherwise advances the public health, safety, and general welfare.

Because the land use plan's standards are wide ranging but explicit, it should be the principal guide to the Planning Board's discussions and actions concerning development proposals, and particularly zoning ordinance amendments. The Board, however, should also look beyond the plan and consider whether development proposals and/or proposed ordinance amendments, even if consistent with the plan, advance the best interests of public health, safety, and general welfare. This very general criterion calls for consideration of a wide range of issues, including, but not limited to, the proposal or amendment's potential impacts on:

- the natural environment – i.e., how development or an amendment might affect air quality, water quality, flooding, erosion, natural areas, etc.;
- important natural resources;
- the transportation system – i.e., whether any additional traffic generated by development or allowed by an amendment can be safely and efficiently accommodated by the Town's transportation facilities;
- the provision of utilities and services – i.e., whether any additional demands for water supply, electricity, refuse collection, fire and police protection, education, health care, recreation, etc. generated by development or allowed by an amendment can be safely and efficiently accommodated by public, community, or private utility and service systems;
- the Town economy – i.e., how development or development allowed by an amendment might affect employment opportunities and the general health of the Duck economy;

- important architectural, historical, archeological, and cultural resources – i.e., how development or an amendment might threaten or enhance the continued existence and integrity of resources of architectural, historical, archeological, or cultural significance;
- neighboring development – i.e., how development or that allowed by an amendment might affect living or working conditions in neighboring areas (including whether development or that allowed by an amendment might deter or enhance the appropriate development or conservation of neighboring property; and,
- community function, character, and attractiveness – i.e., how development or an amendment might enhance the attractive and functional mix of land uses needed to meet the needs of future populations and avoid adverse impacts.

B. Existing Development Management Program

State land use planning guidelines require that the plan include the following information related to development management: (1) a description of the Town's existing development management program; (2) a description of the role that this program will play in implementing the plan; and (3) a description of the steps that the Town will take to coordinate the ordinances and codes to implement the plan. The Town's existing development management program includes all of the ordinances, regulations, codes, policies, and directives that affect land use and development within its jurisdiction.

The following are land use related ordinances, codes, and resolutions that have been adopted or implemented by Duck and the department responsible for managing each. A statement of how each will be used to implement the plan and the State management topics that are affected are noted.

- **Ordinance No: 02-02 Providing for Administration of the Town of Duck; Providing for the Form of Ordinances; Authorizing the Creation of Regulatory Templates; and Establishing a Planning Board and Board of Adjustment for the Town and adopting by resolution, the zoning ordinance.**

Managing department: Town Manager's Office, Planning and Inspections Department.

Use in plan implementation: This ordinance creates the Town's land use related administrative entities and management procedures, thereby contributing to the health, safety, and general welfare of residents and visitors and the protection of natural features and environmentally fragile areas.

State management topic(s) affected: Land Use Compatibility, Infrastructure Carrying Capacity, Natural Hazard Areas, and Water Quality.

Needed adjustments or amendments: Beginning in 2004, the Town Council and Planning Board are conducting a thorough review of all Town ordinances. Amendments to ordinances that may result from these efforts will

be developed, submitted for public review and comment, and implemented as needed during the planning period.

- **Ordinance No: 02-03 Providing for the Orderly Rebuilding and Reconstruction Following a Damaging Storm and to Establish a Local Assessment Team**

Managing department: Town Manager's Office, Planning and Inspections Department.

Use in plan implementation: This ordinance is used to promote and ensure orderly, managed rebuilding and reconstruction following a storm event, thereby contributing to the health, safety, and general welfare of residents and visitors and the protection of natural features and environmentally fragile areas.

State management topic(s) affected: Land Use Compatibility, Infrastructure Carrying Capacity, Natural Hazard Areas, and Water Quality.

Needed adjustments or amendments: Beginning in 2004, the Town Council and Planning Board are conducting a thorough review of all Town ordinances. Amendments to ordinances that may result from these efforts will be developed, submitted for public review and comment, and implemented as needed during the planning period.

- **Ordinance No: 02-05 Regulating Driving or Placement of Vehicles on Sand Dunes and Beaches within the Town of Duck**

Managing department: Town Manager's Office, Planning and Inspections Department.

Use in plan implementation: This ordinance is used to promote and ensure regulated beach driving, thereby contributing to the health, safety, and general welfare of residents and visitors and the protection of natural features and environmentally fragile areas.

State management topic(s) affected: Public Access, Land Use Compatibility, Natural Hazard Areas, and Water Quality.

Needed adjustments or amendments: Beginning in 2004, the Town Council and Planning Board are conducting a thorough review of all Town ordinances. Amendments to ordinances that may result from these efforts will be developed, submitted for public review and comment, and implemented as needed during the planning period.

- **Ordinance No: 02-06 Defining and Prohibiting Abandoned, Nuisance and Junked Motor Vehicles within the Town of Duck**

Managing department: Town Manager's Office, Planning and Inspections Department.

Use in plan implementation: This ordinance is used to prohibit abandoned, nuisance, and junked vehicles to promote and ensure the continuance of Duck's appealing visual character, thereby contributing to the health, safety,

and general welfare of residents and visitors and the protection of natural features and environmentally fragile areas

State management topic affected: Land Use Compatibility, Natural hazard Areas, and Water Quality.

Needed adjustments or amendments: Beginning in 2004, the Town Council and Planning Board are conducting a thorough review of all Town ordinances. Amendments to ordinances that may result from these efforts will be developed, submitted for public review and comment, and implemented as needed during the planning period.

- **Ordinance No: 02-07 Providing for the Repair, Closing or Demolition of Abandoned Structures**

Managing department: Town Manager's Office, Planning and Inspections Department.

Use in plan implementation: This ordinance is used to ensure that abandoned structures are stabilized and/or removed to promote and ensure Duck's appealing visual character, thereby contributing to the health, safety, and general welfare of residents and visitors and the protection of natural features and environmentally fragile areas.

State management topic affected: Land Use Compatibility, Natural Hazard Areas, and Water Quality.

Needed adjustments or amendments: Beginning in 2004, the Town Council and Planning Board are conducting a thorough review of all Town ordinances. Amendments to ordinances that may result from these efforts will be developed, submitted for public review and comment, and implemented as needed during the planning period.

- **Ordinance No: 02-08 Providing for the Collection, Disposal and Storage of Solid Waste within the Town of Duck**

Managing department: Town Manager's Office, Planning and Inspections Department.

Use in plan implementation: This ordinance is used to ensure that solid waste is properly collected and disposed of to promote and ensure Duck's appealing visual character, thereby contributing to the health, safety, and general welfare of residents and visitors and the protection of natural features and environmentally fragile areas.

State management topic(s) affected: Land Use Compatibility, Natural Hazard Areas, and Water Quality.

Needed adjustments or amendments: Beginning in 2004, the Town Council and Planning Board are conducting a thorough review of all Town ordinances. Amendments to ordinances that may result from these efforts will be developed, submitted for public review and comment, and implemented as needed during the planning period.

- **Ordinance No: 02-10 Establishing the Town of Duck as a Bird Sanctuary**

Managing department: Town Manager's Office, Planning and Inspections Department.

Use in plan implementation: This ordinance is used to ensure that birds are provided sanctuary, thereby contributing to the protection of natural features, native species, and environmentally fragile areas.

State management topic(s) affected: Land Use Compatibility and Natural Hazard Areas.

Needed adjustments or amendments: Beginning in 2004, the Town Council and Planning Board are conducting a thorough review of all Town ordinances. Amendments to ordinances that may result from these efforts will be developed, submitted for public review and comment, and implemented as needed during the planning period.

- **Ordinance No: 02-11 Prohibiting Unreasonably Loud, Disturbing and Unnecessary Noise within the Town of Duck**

Managing department: Town Manager's Office, Planning and Inspections Department.

Use in plan implementation: This ordinance is used to ensure general tranquility and promote Duck's appealing character and image, thereby contributing to the health, safety, and general welfare of residents and visitors.

State management topic(s) affected: Land Use Compatibility.

Needed adjustments or amendments: Beginning in 2004, the Town Council and Planning Board are conducting a thorough review of all Town ordinances. Amendments to ordinances that may result from these efforts will be developed, submitted for public review and comment, and implemented as needed during the planning period.

- **Ordinance No: 03-04 Amending Ordinance No: 03-01 Imposing a Moratorium on Acceptance of Site or Development Plans for Commercial Structures or Buildings**

Managing department: Town Manager's Office, Planning and Inspections Department.

Use in plan implementation: This ordinance is used to allow for sufficient time for adequate study of regulations and options to ensure commercial development occurs in a manner that continues and promotes the appealing Duck image and character, thereby contributing to the health, safety, and general welfare of residents and visitors and the protection of natural features and environmentally fragile areas.

State management topic(s) affected: Land Use Compatibility, Infrastructure Carrying Capacity, Natural Hazard Areas, and Water Quality.

Needed adjustments or amendments: Beginning in 2004, the Town Council and Planning Board are conducting a thorough review of all Town

ordinances. Amendments to ordinances that may result from these efforts will be developed, submitted for public review and comment, and implemented as needed during the planning period.

- **Ordinance No: 03-05 Imposing a Moratorium on the Subdivision of Land**

Managing department: Town Manager's Office, Planning and Inspections Department.

Use in plan implementation: This ordinance is used to allow for sufficient time for adequate study of regulations and options to ensure the platting of residential lots occurs in a manner that continues and promotes the appealing Duck image and character, thereby contributing to the health, safety, and general welfare of residents and visitors and the protection of natural features and environmentally fragile areas.

State management topic(s) affected: Land Use Compatibility, Infrastructure Carrying Capacity, Natural Hazard Areas, and Water Quality.

Needed adjustments or amendments: Beginning in 2004, the Town Council and Planning Board are conducting a thorough review of all Town ordinances. Amendments to ordinances that may result from these efforts will be developed, submitted for public review and comment, and implemented as needed during the planning period.

- **Ordinance No: 03-06 Amending the Zoning Ordinance (concerning) Tourist Orientation Directional Signs**

Managing department: Town Manager's Office, Planning and Inspections Department.

Use in plan implementation: This ordinance is used to ensure the provision of necessary information to improve and assist pedestrian movement in a manner that continues and promotes the appealing Duck image and character, thereby contributing to the health, safety, and general welfare of residents and visitors and the protection of natural features and environmentally fragile areas.

State management topic(s) affected: Land Use Compatibility, Infrastructure Carrying Capacity, Natural Hazard Areas, and Water Quality.

Needed adjustments or amendments: Beginning in 2004, the Town Council and Planning Board are conducting a thorough review of all Town ordinances. Amendments to ordinances that may result from these efforts will be developed, submitted for public review and comment, and implemented as needed during the planning period.

- **Ordinance No: 03-07 Amending the Zoning Ordinance (concerning) Large Structures**

Managing department: Town Manager's Office, Planning and Inspections Department.

Use in plan implementation: This ordinance is used to ensure structures that are constructed in Duck are sized so as to continue and promote the appealing Duck image and character, thereby contributing to the health, safety, and general welfare of residents and visitors and the protection of natural features and environmentally fragile areas.

State management topic(s) affected: Land Use Compatibility, Infrastructure Carrying Capacity, Natural Hazard Areas, and Water Quality.

Needed adjustments or amendments: Beginning in 2004, the Town Council and Planning Board are conducting a thorough review of all Town ordinances. Amendments to ordinances that may result from these efforts will be developed, submitted for public review and comment, and implemented as needed during the planning period.

- **Ordinance No: 03-09 Creating the Office of Building Inspector; Adopting the North Carolina State Building Code; and Establishing Requirements for Building Permits**

Managing department: Town Manager's Office, Planning and Inspections Department.

Use in plan implementation: This ordinance creates the Town's building inspection program and land use and building development related administrative entities and management procedures, thereby contributing to the health, safety, and general welfare of residents and visitors and the protection of natural features and environmentally fragile areas.

State management topic(s) affected: Land Use Compatibility, Infrastructure Carrying Capacity, Natural Hazard Areas, and Water Quality.

Needed adjustments or amendments: Beginning in 2004, the Town Council and Planning Board are conducting a thorough review of all Town ordinances. Amendments to ordinances that may result from these efforts will be developed, submitted for public review and comment, and implemented as needed during the planning period.

- **Ordinance No: 03-10 Prohibiting Parking of Vehicles in Certain Places within the Town of Duck**

Managing department: Town Manager's Office, Planning and Inspections Department.

Use in plan implementation: This ordinance is used to promote and ensure proper vehicle parking, thereby contributing to the health, safety, and general welfare of residents and visitors and the protection of natural features and environmentally fragile areas.

State management topic(s) affected: Land Use Compatibility.

Needed adjustments or amendments: Beginning in 2004, the Town Council and Planning Board are conducting a thorough review of all Town ordinances. Amendments to ordinances that may result from these efforts will

be developed, submitted for public review and comment, and implemented as needed during the planning period.

The Town has also passed a number of resolutions which serve to further its goals with respect to land use and management, the provision of services, and the actions to be taken to correct (or mitigate) the impacts of a variety of problem areas.

Resolution No: 02-05 – Resolution Expressing Support for the Maintenance and Enhancement of the Duck Trail.

Resolution No: 02-05 and 02- 07 – Resolution of Intent to Apply for Participation of the Town of Duck in the National Flood Insurance Program.

Resolution No: 02-08 – Resolution Authorizing and Requesting the Application and Enforcement of the Dare County Zoning and Subdivision Ordinances within the Town of Duck.

Resolution No: 02-09 – Resolution Requesting the North Carolina Department of Transportation’s Installation of Designated Crosswalks Across N.C. Highway 12.

Resolution No: 03-03 – Resolution Establishing a Police Department in the Town of Duck, North Carolina.

Resolution No: 03-05 – Resolution Establishing the Municipal Property Acquisition Advisory Committee.

Resolution No: 03-08 – Resolution in Support of Efforts by the Town of Kitty Hawk to Protect Virginia Dare Trail.

Resolution No: 03-11 – Resolution Adopting a Policy for Mutual Assistance with Other Law Enforcement Agencies

Resolution No: 03-12 – Resolution Requesting that Dare County Designate Well Points for the Dare County Regional Water Supply Areas of Environmental Concern in the 2003 Land Use Plan Update.

Resolution No: 03-13 – Resolution Requesting that North Carolina Department of Transportation Address Stormwater Issues on N.C. 12 in the Town of Duck.

Resolution No: 03-15 – Resolution Requesting the North Carolina Department of Transportation Take All Action Necessary to Correct Stormwater Issues on N.C. 12 in the Town of Duck, Particularly at the Entrance to the Tuckahoe Subdivision.

Resolution No: 03-16 – Resolution Approving the 2003-2013 Dare County Solid Waste Management Plan.

Resolution No: 03-22 – Resolution Requesting that the North Carolina Department of Transportation Install Crosswalks within the Town of Duck.

Resolution No: 03-23 – Resolution Establishing the Wright Brothers Bikeway.

Resolution No: 04-01 – Resolution of the Town Council of the Town of Duck, North Carolina, Establishing the Municipal Property Master Plan Study Committee.

Resolution No: 04-03 – Resolution of the Town Council of the Town of Duck, North Carolina, Requesting that the North Carolina Department of Transportation Post a 35 MPH Speed Limit from Sandy Ridge Road to the Currituck County Line Year Round.

Resolution No: 04-04 – Resolution of the Town Council of the Town of Duck, North Carolina, Requesting that the North Carolina Department of Transportation Erect a Hidden Entrance Sign on NC 12 North of Ruddy Duck Lane.

Resolution No: 04-05 – Resolution of the Town Council of the Town of Duck, North Carolina declaring the first Friday after March 15 each year as the annual celebration of Arbor Day.

C. Additional Tools

Tools -- in addition to those already included in the Town's existing development management program -- that will be used to implement the plan are generally grouped under the following four headings: ordinances, capital improvements program, acquisition program, and specific projects. The following paragraphs describe the additional tools Duck intends to develop and use.

1. Ordinances

During the planning period, the Town will consider developing sound and ocean zoning overlay(s) to deal with a variety of land use related issues which may include: uses of and on sound and ocean waters; public access; water quality; storm water management; and/or, commercial development/building design and placement. Within the next five years, the Town will also continue to develop and may adopt and implement Duck village commercial development zoning options to continue the image and character of the Duck village commercial area while promoting flexibility and encouraging positive and imaginative development and building proposals. In additions, the Town will consider and utilize recommendations contained in the commercial development/building design guidelines and standards study commissioned in 2003 and completed in 2004. In this regard, the Town will seek to codify commercial development/building design guidelines and standards.

The protection of natural features and environmentally fragile areas are of utmost importance to the Town. In this regard, the Town intends to study and perhaps

develop a tree and vegetation protection ordinance during the planning period as well as regulations governing property grading and filling.

2. Capital Improvements Program

The Town has indicated in this plan that it intends to develop a capital improvements plan (CIP) during the planning period. The CIP would describe any new, upgraded, or expanded capital facilities that may be undertaken to plan for the provision of facilities that may be needed and to facilitate implementation of the land use plan. The Town will look to the State for funding the development of a CIP.

3. Acquisition Program

The Town acquired a 10.33 acre of sound front property along NC 12 in late 2003, thus positioning itself to establish a town commons area and perhaps public buildings and other facilities on publicly held (Town-owned) land. Currently, the Town's administrative offices and police department are housed in leased space. At present, the Town has no plans to acquire additional acreage but has stated its desire in this plan to be afforded the opportunity to acquire Federal property that may become available. In addition, the Town has indicated that it will seek State assistance to develop a shoreline access plan. If and when such a plan is developed, the Town may look toward acquiring land for access purposes.

4. Specific Projects to Reach Goals

Since its incorporation, Duck has vigorously undertaken a variety of initiatives and projects. Through its efforts to date, Duck has striven to: preserve and protect its image and character; protect its resources, natural features, and environmentally fragile areas; generally improve the economic vitality within Town; provide public services and facilities in an economical and efficient manner; and, generally position itself to be the master of its own development destiny.

During the planning period, Duck intends to undertake and complete a variety of additional projects to (help) implement the land use plan. Some of the projects Duck will undertake include: development of a municipal property master plan; (continue and improve) community outreach and public participation programs and initiatives; development of programs and initiatives to support and encourage business alliances; interaction with/through civic groups; participation in development of a multi-jurisdictional beach management plan; development of Town-based computer mapping expertise and program; development of a Town Code; annual Town Council planning retreat; development of a storm water management plan and implementation program; development of programs to protect environmental resources; and, development of in-house CAMA permitting capability. These projects and the work items cited in the preceding sections (discussion of needed ordinance

work, capital improvement program, and acquisition program), are included in the Town's action plan and schedule which follows.

D. Action Plan and Schedule

State guidelines require land use plans to include a separate action plan and schedule. Duck has identified twenty-one (21) action items it will undertake during the planning period. The action items are:

- ACTION ITEM 1: Develop, adopt, and implement *sound and ocean zoning overlays*.
- ACTION ITEM 2: Develop, adopt, and implement *village commercial development zoning options*.
- ACTION ITEM 3: Develop, adopt, and implement *commercial development/building design guidelines and standards*.
- ACTION ITEM 4: Develop, adopt, and implement *tree and vegetation protection ordinance*.
- ACTION ITEM 5: Develop, adopt, and implement *property grading and filling regulations*.
- ACTION ITEM 6: Develop, adopt, and implement *capital improvements plan (CIP)*.
- ACTION ITEM 7: *Acquisition of property and/or acceptance of easements* on an as needed basis to meet public objectives.
- ACTION ITEM 8: Seek State assistance to *prepare shoreline access plan*.
- ACTION ITEM 9: Develop and implement a *municipal property master plan*.
- ACTION ITEM 10: Continue *community outreach and public participation programs*.
- ACTION ITEM 11: Develop *program to support/encourage business alliance formation*.
- ACTION ITEM 12: Develop *programs to interact with/through civic groups*.
- ACTION ITEM 13: Participate in *multi-jurisdictional beach management planning*.
- ACTION ITEM 14: Participate in *multi-jurisdictional regional transportation*
- ACTION ITEM 15: Develop *Town-based computer mapping program*.
- ACTION ITEM 16: Codify *Town ordinances*.
- ACTION ITEM 17: Conduct *annual Town Council retreat*.
- ACTION ITEM 18: Develop a *storm water management plan*.
- ACTION ITEM 19: Develop (in-house) *CAMA permitting capability*.
- ACTION ITEM 20: Examine potential for an *interconnected Duck Trail along the west side of NC 12 and along the Currituck Sound shore line*.
- ACTION ITEM 21: Prepare *land use plan implementation status report*.

EXHIBIT X-A, Action Plan and Schedule, lists the priority actions that Duck will undertake to implement the plan. EXHIBIT X-A also includes references to the Town's stated policies (from Chapter IX) and the fiscal year, if applicable, in which the actions are to be initiated and completed. The schedule covers a 5-year period, the CAMA land use plan planning period. The action plan and schedule will be used to prepare implementation status reports. Status reports are required by CAMA grant rules and must be made every two years for as long as the plan remains in effect.

**EXHIBIT X-A
DUCK, NORTH CAROLINA
ACTION PLAN AND SCHEDULE**

ACTION ITEMS AND POLICY REFERENCES	2004	2005	2006	2007	2008	2009
Action Item 1. Sound and ocean zoning overlays. Policy #'s 1,4,5,6,7,8,9,12,13,18,19,23,27, and 28						
Action Item 2. Village commercial development zoning options. Policy #'s 4, 5, 6, 7, 8, 12, 14, 15,18,19, and 25						
Action Item 3. Commercial development/building design guidelines and standards. Policy #'s 4,5,6,7,8,12,14,15,18,19, and 25						
Action Item 4. Tree and vegetation protection ordinance. Policy #'s 3,5,6,7,8,12,13,18,19, and 23						
Action Item 5. Property grading and filling regulations. Policy #'s 3,5,6,7,8,12,13,18,19, and 23						
Action Item 6. Capital Improvements Plan (CIP). Policy #'s 1,3,4,6,8,9,10,11,14,15,16, 17,20,22,23,24,25, and 26						
Action Item 7. Acquisition of property and/or acceptance of easements. Policy #'s 1,3,4,6,8, 9,10,11,14,15,16,17,20,22,23,24,25,and 26	*	*	*	*	*	*
Action Item 8. Prepare shoreline access plan. Policy #'s 1,2,3,5,6,8,9,10,11,12,13,16,19, 24,25, and 27						
Action Item 9. Municipal property master plan. Policy #'s 5,6,8,10,12,13,16,24, and 25						
Action Item 10. Community outreach and public participation programs. Policy #'s 4,5,7,12,15 18, and 19						
Action Item 11. Program to support/encourage business alliance formation. Policy #'s 4,5,7,15, and 18						
Action Item 12. Programs to interact with/through civic groups. Policy #'s 5,7,12,18, and 19						

EXHIBIT X-A (continued)
DUCK, NORTH CAROLINA
ACTION PLAN AND SCHEDULE

ACTION ITEMS AND POLICY REFERENCES	2004	2005	2006	2007	2008	2009
Action Item 13. Multi-jurisdictional beach management planning. Policy #'s 1,2,3,5,6,9, 11,12,13,16,24,27, and 28						
Action Item 14. Multi-jurisdictional regional transportation planning. Policy #'s 5,6,8,10,11 12,17,18,19,24, and 28						
Action Item 15. Town-based computer mapping program. Policy #'s 10 and 12						
Action Item 16. Codify Town ordinances. Policy #'s 1,2,3,5,6,12,13,17,18,19,21,27, and 28						
Action Item 17. Annual Town Council retreat. Policy #'s 10 and 11						
Action Item 18. Storm water management plan. Policy #'s 4,10,12,13,18,19,23,26, and 28						
Action Item 19. CAMA permitting capability. Policy #'s 1,4,6,7,9,11,12,13,16,18,19,27, and 28						
Action Item 20. Interconnected Duck Trail along NC 12 and Currituck Sound. Policy #'s 5,6,8,10, 11,12,17,18,19,24, and 28						
Action Item 21. Land use plan implementation status report. Policy #'s 9 and 11						

*As needed.

WORKSHOPS AND MEETINGS

The section to be completed upon adoption of the 2003-2004 CAMA CORE Land Use Plan by the Duck Town Council.

February 7, 2003	Land Use Plan Committee Meeting (Phase 1 orientation)
March 7, 2003	Public Input Session
March 7, 2003	Land Use Plan Committee Meeting (discussion of issues)
April 2, 2003	Land Use Plan Committee Meeting (review chapters I, II, and III)
May 2, 2003	Land Use Plan Committee Meeting (review chapters IV, V, and VI)
June 6, 2003	Land Use Plan Committee Meeting (review chapters VII and VIII)
September 5, 2003	Land Use Plan Committee Meeting (Phase II orientation)
October 3, 2003	Land Use Plan Committee Meeting (review chapter IX)
November 7, 2003	Land Use Plan Committee Meeting (review chapter IX)
December 5, 2003	Land Use Plan Committee Meeting (continue review of chapter IX, future land use map, and review chapter X)
January 2, 2004	Land Use Plan Committee Meeting (continue review of chapter IX, future land use map, and review chapter X)
January 22, 2004	Town Council/Planning Board retreat
February 6, 2004	Land Use Plan Committee Meeting (continue review of chapter X)
March 5, 2004	Land Use Plan Committee Meeting (continue review of chapter X)
April, 2004	During April, 2004, the Town distributed land use plan information to (and planning staff attended) neighborhood and civic group annual meetings.
April 12, 2004	Town of Duck Citizen Outreach Meeting
December 3, 2004	Land Use Plan Committee Meeting (review of State (DCM) land use plan comments)
December 10, 2004	Planning Board Meeting (review of draft land use plan)
January 14, 2005	Planning Board Meeting (recommendation of draft plan)
February 2, 2005	Town Council Public Hearing (adoption of plan)

Duck developed and adopted a Citizen Participation Plan (CPP) at the beginning of the CAMA CORE Land Use Plan development process. The CPP is on file in the Duck Town Planner's Office. In addition to the numerous workshops and meetings held during the planning process, information about the land use plan process and copies of draft chapters and exhibits were posted on the Town's website. Information was also distributed, and input was solicited at a number of civic group meetings held during the planning process. A citizen questionnaire was also distributed throughout the process and posted on the Town's website. Nearly eighty responses were received, reviewed, and considered by the Town.

SOURCES CONSULTED

Dare County Geographic Information System
Dare County Health Department
Dare County Local Water Supply Plan (Dare County Water Department)
Dare County Planning Department
Dare County Water Department
Dare County Tax Department
Dare County CAMA Land Use Plan Update 2002
Town of Duck CAMA CORE Land Use Plan Committee
Town of Duck Fire Department
Town of Duck Inspections Office
Town of Duck Manager's Office
Town of Duck Ordinances
Town of Duck Planning Board
Town of Duck Planning Office
Town of Duck Police Department
Town of Duck Town Council
North Carolina Administrative Code
NC Department of Agriculture and Consumer Services
NC Department of Environment and Natural Resources
NC Department of Health and Human Services
NC Department of Transportation
NC Division of Coastal Management
NC Division of Marine Fisheries
NC Division of Soil and Water Conservation
NC Division of Water Quality
NC Division of Waste Management
NC Forest Service
NC Marine Fisheries Commission
NC Natural Heritage Program
NC Public Water Supply Section
NC State Demographer's Office
NC Wildlife Resources Commission
Pasquotank River Basinwide Water Quality Plan, July 2002 (Division of Water Quality)
Soil Survey of Dare County North Carolina (US Department of Agriculture)
US Army Corps of Engineers
US Census Bureau
US Department of Agriculture
US Environmental Protection Agency
US Fish and Wildlife Service
US Geological Survey

INDEX

NOTE: This section is provided to assist the user/reader in locating information pertaining to a variety of items (terms, issue areas, concepts, facilities, programs, agencies, etc.) discussed or referenced in the Duck 2003-2004 CAMA CORE Land Use Plan. Some of the items are specific to Duck, while most are generally associated with North Carolina CAMA land use planning. The items listed, and the page numbers provided for each, may not be totally inclusive, and thus serve to guide the user/reader to items of interest.

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No items cited.

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No items cited.

Z

No items cited.

APPENDICES

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	SOURCE: Dare County Water Department	
	Geographic Information System, August 26, 2004.	



APPENDIX 1
Dare County Water System
Serving Duck, NC

Legend

Distribution Lines	
2	Green
4	Yellow
6	Red
8	Blue
12	Orange
16	Light Blue

DUCK WATER SYSTEM
DUCK, NC

0 800 1,600 3,200 4,800 Feet

1 inch equals 2,000 feet

N
W
E
S

DARE COUNTY WATER
GIS
MATTHEW HIBLER
AUGUST 26, 2004

